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Mathematics in Life

Skills, Consumer and Career Applications

Solution Key

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Gage Educational Publishing Limited
Agincourt, Ontario

This solution key contains answers for all exercises in MATHEMATICS IN LIFE. Steps needed to obtain answers are shown in brackets for most applications exercises. The responses are keyed to the student's book by page number.

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Page 3

Pretest

A 489
B 1052
C 1127
D 8850
E 3612
F 1558
G 1984
H 30
I 14
J $x = 68$
K $a = 201$

Page 4

Set A

1. 86
2. 955
3. 68
4. 927
5. 8895
6. 398
7. 299
8. 7528
9. 1977
10. 6978

Set B

1. 66
2. 905
3. 509
4. 601
5. 9957
6. 102
7. 1002
8. 3358
9. 500
10. 8545
11. 1098
12. 96 299
13. 2232
14. 7801

Page 5

Set C

1. 162
2. 2920
3. 2682
4. 1521
5. 1560
6. 5773
7. 215
8. 1091
9. 159
10. 7704
11. 11 745
12. 11 866
13. 3945
14. 58 087
15. 979 032
16. 2167
17. 9350

Set D

1. 305
2. 957
3. 114
4. 5542
5. 1013
6. 5672
7. 522
8. 37
9. 27
10. 2910
11. 7268
12. 908
13. 907
14. 5993
15. 8253
16. 1023
17. 1580
18. 251
19. 246
20. 41 627
21. 34 456
22. 210
23. 1421
24. 6464
25. 5499
26. 11 664
27. 379
28. 3783

Page 6

Set E

1. 612
2. 137
3. 2121
4. 4532
5. 20 970
6. 1123
7. 2322
8. 41 102
9. 3751
10. 6237

Set F

1. 888
2. 424
3. 56
4. 7285
5. 4888
6. 786
7. 5783
8. 886
9. 1720
10. 19
11. 847
12. 88
13. 2184
14. 952

Page 7

Set F (continued)

15. 38
16. 867
17. 2607
18. 4589
19. 3687
20. 78
21. 317
22. 2710
23. 4611
24. 2034
25. 1679
26. 8629
27. 24 396
28. 20 239
29. 3912
30. 1819
31. 19 379
32. 2532
33. 38 882
34. 13 072
35. 26 346
36. 74 808
37. 7564
38. 39 745
39. 75 628
40. 2246
41. 295
42. 27 321

Set G

1. 261
2. 58
3. 4128
4. 485
5. 4
6. 92
7. 231
8. 639
9. 318
10. 30
11. 343
12. 7321
13. 5336
14. 8152
15. 4606
16. 5888
17. 7928
18. 2756
19. 31 373
20. 5239
21. 8886
22. 45 032
23. 48 459
24. 3861
25. 14 758
26. 50 613
27. 23 472
28. 406

Page 8

Set H

1. 7
2. 16
3. 25
4. 70
5. 40
6. 15
7. 32
8. 56
9. 24
10. 44
11. 40
12. 23
13. 85
14. 42
15. 17
16. 28
17. 52
18. 57
19. 9
20. 26
21. 11
22. 100
23. 315
24. 146
25. 170

Page 9

Set I

1. 12
2. 17
3. 7
4. 11
5. 53
6. 6
7. 122
8. 24
9. 9
10. 30
11. 167
12. 36
13. 28
14. 37
15. 90
16. 0
17. 111
18. 55
19. 39
20. 21
21. 162
22. 50
23. 12
24. 297
25. 508
26. 579
27. 25
28. 202

Break Time: House numbers

Page 10

Set J

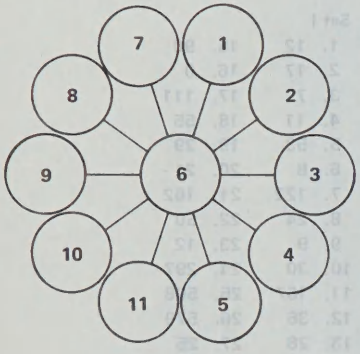
1. $x = 35$
2. $a = 320$
3. $n = 22$
4. $d = 25$
5. $b = 22$
6. $q = 61$
7. $c = 21$
8. $t = 12$
9. $g = 65$
10. $y = 54$
11. $h = 27$
12. $v = 13$
13. $k = 35$
14. $p = 28$
15. $a = 18$
16. $z = 57$
17. $w = 13$
18. $f = 47$
19. $x = 66$
20. $s = 280$
21. $r = 38$
22. $h = 215$
23. $b = 162$
24. $g = 64$
25. $k = 1011$

Page 11

Set K

1. $n = 139$
2. $g = 129$
3. $k = 33$
4. $d = 86$
5. $c = 83$
6. $b = 38$
7. $v = 44$
8. $w = 58$
9. $y = 90$
10. $d = 90$
11. $f = 85$
12. $z = 137$
13. $r = 58$
14. $n = 114$
15. $s = 61$
16. $h = 123$
17. $j = 157$
18. $p = 119$
19. $a = 103$
20. $q = 129$
21. $x = 885$
22. $y = 52$
23. $z = 241$
24. $t = 1246$
25. $w = 345$

Break Time: Answers may vary.



Page 12

Posttest

A 429
B 813
C 733
D 986
E 5221
F 2678
G 3789
H 55
I 13
J $x = 56$
K $y = 85$

Page 13

1. Monday: 9600 kJ, 60 g
   Tuesday: 6000 kJ, 278 g
2. 3300 kJ [9600 - 6300 = 3300]
3. 218 g [278 - 60 = 218]
4. Wednesday:
   2150 kJ [6300 - 4150 = 2150]
   19 g [60 - 41 = 19]
   Thursday:
   1800 kJ [6300 - 4500 = 1800]
   23 g [60 - 37 = 23]
   Friday:
   2750 kJ [6300 - 3550 = 2750]
   32 g [60 - 28 = 32]
   Saturday:
   1450 kJ [6300 - 4850 = 1450]
   21 g [60 - 39 = 21]
   Sunday:
   2350 kJ [6300 - 3950 = 2350]
   17 g [60 - 43 = 17]

Pages 14-15

1. $460
2. $442
3. $342
4. $403
5. Bus
6. $61 [403 - 342 = 61]
7. $118 [460 - 342 = 118]
8. $18 [460 - 442 = 18]
9. $39 [442 - 403 = 39]
10. 113 h [120 - 7 = 113]
11. $480
12. $326
13. $286
14. $371
15. $85 [371 - 286 = 85]
16. 68 h [58 - 24 = 34,
    2 X 34 = 68]
17. $300
18. $208
19. $199
20. $246
21. $54 [300 - 246 = 54]
22. 67 h [72 - 5 = 67]

Page 17

1. $6347 [7000 - 653 = 6347]
   $6087 [6347 - 260 = 6087]
   $5478 [6087 - 609 = 5478]
2. $7135 $6810 $681 $6129
3. $7922 $7532 $753 $6779
4. $8692 $8232 $823 $7409
5. $9460 $8929 $893 $8036
6. $10 219 $9615 $962 $8653
7. $10 969 $10 288 $1029 $9259
8. $11 719 $10 962 $1096 $9866
9. $12 469 $11 630 $1163 $10 467
10. $13 218 $12 296 $1230 $11 066
11. $13 956 $12 947 $1295 $11 652
12. $14 671 $13 567 $1357 $12 210
13. $15 386 $14 188 $1419 $12 769
14. $16 100 $14 807 $1481 $13 326

Pages 18-19

1. 5 degree days [18 - 13 = 5]
2. 1 degree day [18 - 17 = 1]
3. 2 degree days [18 - 16 = 2]
4. 7 degree days [18 - 11 = 7]
5. 14 degree days [18 - 4 = 14]
6. 9 degree days [18 - 9 = 9]
7. 18 degree days [18 - 0 = 18]
8. 56 degree days
   [5 + 1 + 2 + 7 + 14 + 9 + 18 = 56]
9. 428 degree days
10. 12 degree days [440 - 428 = 12]
11. 207 degree days
    [109 + 124 = 233, 440 - 233 = 207]
12. 1058 L [9475 - 8417 = 1058]
13. 812 L
14. 934 L
15. 703 L
16. 1135 L
17. 1352 L
18. 5994 L
19. 972 L [8320 - 7348 = 972]
20. 1298 L
21. 983 L
22. 1095 L
23. 709 L
24. 987 L
25. 6044 L

Page 20

Chapter Test

1. 387
2. 944
3. 1057
4. 4208
5. 2141
6. 1589
7. 8458
8. 79
9. 20 [27 - 7 = 20]
10. $d = 35$ [$37 - 37 + d = 72 - 37$]
11. $t = 38$ [$t - 21 + 21 = 17 + 21$]
12. 6250 kJ
13. $326
14. $16 766
15. $15 031
16. $13 528
17. 161 degree days [440 - 279 = 161]
18. 847 L [2645 - 1798 = 847]

Page 21

Pretest

A 30 000
B 12 000
C 248
D 162
E 40 272
F 2832
G 1520
H 864
I 164 268
J 4992
K 508 200
L 30 738
M 178 922
N 110
O 7

Page 22

Set A

1. 8000
2. 6000
3. 1000
4. 50
5. 300 000
6. 100
7. 900
8. 10 000
9. 6000
10. 2000
11. 800 000
12. 700 000
13. 10 000
14. 1000
15. 4000
16. 800
17. 40 000
18. 100 000
19. 80
20. 1 000 000
21. 600 000
22. 300
23. 40 000
24. 500 000
25. 100 000
26. 100 000 000
27. 500
28. 70 000
29. 25 000
30. 1 000 000
31. 20 000
32. 3000
33. 3000
34. 5600
35. 2500
36. 10 000 000
37. 40 000
38. 680 000
39. 50 000
40. 100 000
41. 7400
42. 9000
43. 2000
44. 1 000 000
45. 7 000 000
46. 90 000
47. 300 000
48. 6300
49. 2 000 000
50. 320 000

Page 23

Set B

1. 35 000
2. 24 000
3. 7200
4. 150
5. 32 000
6. 210 000
7. 240 000
8. 3600
9. 42 000
10. 63 000
11. 1800
12. 1600
13. 450 000
14. 210
15. 210 000
16. 10 000
17. 800
18. 120 000
19. 24 000
20. 150 000
21. 720 000
22. 5600
23. 360 000
24. 12 000
25. 280
26. 64 000
27. 200 000
28. 3600
29. 560 000
30. 27 000
31. 490 000
32. 2400
33. 14 000 000
34. 45 000
35. 12 000
36. 1000
37. 180 000
38. 3 600 000
39. 1600
40. 18 000 000
41. 180
42. 80 000
43. 40 000
44. 450 000
45. 240 000
46. 35 000
47. 800 000
48. 1800
49. 35 000 000
50. 56 000 000
51. 2 400 000
52. 1 000 000
53. 21 000 000
54. 3 200 000
55. 24 000 000
56. 18 000 000

Break Time: Open the first 3 links and use them to connect the other sets of links.

Page 24

Set C

1. 368
2. 219
3. 128
4. 155
5. 144
6. 166
7. 123
8. 48
9. 324
10. 39

Set D

1. 175
2. 272
3. 330
4. 288
5. 329
6. 228
7. 396
8. 105
9. 576
10. 595
11. 58
12. 228
13. 161
14. 564
15. 145
16. 152

Page 25

Set E

1. 45 712
2. 3344
3. 2781
4. 52 633
5. 1610
6. 485 163
7. 2010
8. 30 120
9. 20 272
10. 1812
11. 38 812
12. 6736
13. 789 426
14. 1912
15. 181 448
16. 35 280
17. 1041
18. 12 054
19. 340 443
20. 2655
21. 45 591
22. 45 030
23. 2708
24. 88 656
25. 44 465
26. 2454
27. 588 192
28. 7 236 603

Set F

1. 25 542
2. 294
3. 2296
4. 14 301
5. 603
6. 2840
7. 248 829
8. 265
9. 19 014
10. 5392
11. 230 484
12. 2472
13. 315
14. 207 432
15. 5556
16. 24 729
17. 124
18. 379 520
19. 563 272
20. 3735
21. 616
22. 23 056
23. 526
24. 540 252
25. 448
26. 55 794
27. 193 146
28. 355
29. 4824
30. 4734
31. 40 015
32. 361 628
33. 186 642
34. 4625
35. 105
36. 45 372
37. 4405
38. 114 056
39. 33 747
40. 210
41. 78 885
42. 335
43. 2412
44. 66 080
45. 583 515
46. 867
47. 15 875
48. 216
49. 118 938
50. 3360
51. 48 560
52. 263 070
53. 22 974
54. 5496
55. 279 372
56. 357 830

Page 26

Set G

1. 4550
2. 1770
3. 2580
4. 1700
5. 6840
6. 2850
7. 2720
8. 8550
9. 1860
10. 4080

Set H

1. 2436
2. 2106
3. 810
4. 2988
5. 912
6. 2100
7. 2790
8. 1098
9. 1078
10. 3515
11. 4982
12. 1504
13. 3392
14. 1200
15. 3234
16. 2726

Page 27

Set I

1. 46 332
2. 228 555
3. 329 355
4. 580 480
5. 19 517
6. 360 840
7. 237 276
8. 35 446
9. 289 984
10. 5 440 408
11. 14 652
12. 78 744
13. 12 958
14. 3 207 225
15. 388 606
16. 7275
17. 3 231 072
18. 133 152
19. 52 461
20. 364 468
21. 60 371
22. 5 110 495
23. 15 792
24. 221 238
25. 18 040 064
26. 32 496
27. 8 876 276
28. 3 216 057

Set J

1. 19 499
2. 3906
3. 372 070
4. 50 778
5. 289 520
6. 5046
7. 457 440
8. 1 176 111
9. 268 859
10. 22 050
11. 3952
12. 482 479
13. 1 122 080
14. 49 698
15. 3648
16. 256 890
17. 875 710
18. 2 040 612
19. 37 800
20. 6160
21. 2 478 424
22. 498 581
23. 7 263 990
24. 2576
25. 18 618
26. 3 530 100
27. 196 992
28. 6175
29. 17 500
30. 171 190
31. 11 823
32. 3 960 315
33. 291 308
34. 2139
35. 54 360
36. 1 143 116
37. 2 675 424
38. 266
39. 60 560
40. 2 481 500
41. 135 675
42. 15 912
43. 7 388 550
44. 5264
45. 204 330
46. 4186
47. 49 800
48. 809 820
49. 16 890
50. 257 438
51. 3471
52. 92 320
53. 15 120
54. 4 709 340
55. 517 638
56. 4680

Page 28

Set K

1. 173 400
2. 450 100
3. 413 500
4. 362 000
5. 592 200
6. 608 000
7. 494 400
8. 297 900
9. 299 600
10. 635 400

Set L

1. 204 592
2. 838 480
3. 378 350
4. 66 674
5. 242 004
6. 735 080
7. 317 461
8. 501 332
9. 207 060
10. 498 590
11. 69 360
12. 543 510
13. 167 634
14. 320 170
15. 617 040
16. 103 477

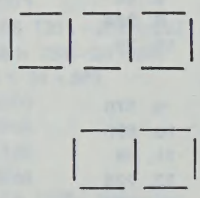
Page 29

Set M

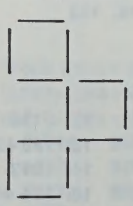
1. 571 250
2. 1 698 752
3. 645 018
4. 97 335
5. 633 150
6. 1 353 408
7. 926 100
8. 251 672
9. 456 615
10. 5 605 672
11. 4 477 179
12. 280 340
13. 389 872
14. 83 720
15. 3 529 546
16. 83 472
17. 149 490
18. 754 690
19. 82 383 107
20. 24 739 000
21. 1 584 260
22. 2 105 246
23. 217 316
24. 2 121 768
25. 5 119 193
26. 97 185
27. 2 758 245
28. 57 324 492

Break Time: Answers may vary. Samples are given.

5 squares



3 squares



Page 30

Set N

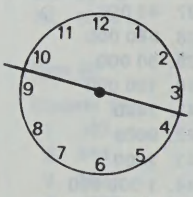
1. 13
2. 43
3. 26
4. 22
5. 47
6. 30
7. 22
8. 66
9. 18
10. 21
11. 54
12. 22
13. 40
14. 50
15. 33
16. 56
17. 140
18. 45
19. 19
20. 74
21. 62
22. 29
23. 76
24. 28
25. 47

Page 31

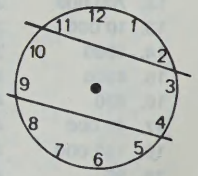
Set O

1. 6
2. 7
3. 29
4. 105
5. 30
6. 26
7. 6
8. 480
9. 14
10. 96
11. 69
12. 150
13. 48
14. 17
15. 39
16. 200
17. 3
18. 8
19. 16
20. 93
21. 14
22. 40
23. 21
24. 46
25. 11
26. 27
27. 54
28. 10

Break Time:
Note that the sum of the numbers 1 through 12 is 78. 39 + 39 = 78 and 26 + 26 + 26 = 78.



Each sum is 39.



Each sum is 26.

Page 32

Posttest

A	60 000	I	327 658
B	120 000	J	7641
C	246	K	408 800
D	152	L	576 114
E	22 827	M	262 845
F	7316	N	27
G	3150	O	8
H	3515		

Dee

TRIPLE Yahtzee®

UPPER SECTION	HOW TO SCORE	GAME 1 ONE	TWO	THREE
Aces • = 1	COUNT AND ADD ONLY ACES	1	2	3
Twos = 2	COUNT AND ADD ONLY TWOS	4	6	6
Threes = 3	COUNT AND ADD ONLY THREES	6	6	12
Fours = 4	COUNT AND ADD ONLY FOURS	8	4	16
Fives = 5	COUNT AND ADD ONLY FIVES	15	10	20
Sixes = 6	COUNT AND ADD ONLY SIXES	18	18	24
TOTAL	→	52	46	81
Bonus IF TOTAL SCORE IS 63 OR OVER	SCORE 35 →	--	--	35
TOTAL OF UPPER SECTION	→	52	46	116

LOWER SECTION

3 of a kind	ADD TOTAL OF ALL DICE	26	25	27
4 of a kind	ADD TOTAL OF ALL DICE	0	18	15
Full House	SCORE 25	25	25	25
Sm. Straight (SEQUENCE OF 4)	SCORE 30	30	30	30
Lg. Straight (SEQUENCE OF 5)	SCORE 40	0	40	40
YAHTZEE 5 OF A KIND	SCORE 50	0	0	50
Chance	SCORE TOTAL OF ALL 5 DICE	24	25	26
Lower Section Total	→	105	163	213
Upper Section Total	→	52	46	116
COMBINED TOTAL OF UPPER AND LOWER SECTIONS	→	157	209	329

		ENTER COMBINED TOTAL ↓	DOUBLE COMBINED TOTAL ↓	TRIPLE COMBINED TOTAL ↓
TRIPLE YAHTZEE TOTAL SCORE	→	157	418	987
GRAND TOTAL Add Total of Three Columns	→	1562 GRAND TOTAL		

Use Other Side to Record Each Players Scores

2 D 73

Barbara

TRIPLE Yahtzee®

UPPER SECTION	HOW TO SCORE	GAME 1 ONE	TWO	THREE
Aces • = 1	COUNT AND ADD ONLY ACES	3	1	2
Twos = 2	COUNT AND ADD ONLY TWOS	6	6	8
Threes = 3	COUNT AND ADD ONLY THREES	12	6	9
Fours = 4	COUNT AND ADD ONLY FOURS	8	12	16
Fives = 5	COUNT AND ADD ONLY FIVES	15	15	10
Sixes = 6	COUNT AND ADD ONLY SIXES	12	18	18
TOTAL	→	56	58	63
Bonus IF TOTAL SCORE IS 63 OR OVER	SCORE 35 →	--	--	35
TOTAL OF UPPER SECTION	→	56	58	98

LOWER SECTION

3 of a kind	ADD TOTAL OF ALL DICE	25	17	21
4 of a kind	ADD TOTAL OF ALL DICE	23	29	26
Full House	SCORE 25	25	25	25
Sm. Straight (SEQUENCE OF 4)	SCORE 30	30	30	30
Lg. Straight (SEQUENCE OF 5)	SCORE 40	40	40	40
YAHTZEE 5 OF A KIND	SCORE 50	0	0	50
Chance	SCORE TOTAL OF ALL 5 DICE	18	21	24
Lower Section Total	→	161	162	220
Upper Section Total	→	56	58	98
COMBINED TOTAL OF UPPER AND LOWER SECTIONS	→	217	220	318

		ENTER COMBINED TOTAL ↓	DOUBLE COMBINED TOTAL ↓	TRIPLE COMBINED TOTAL ↓
TRIPLE YAHTZEE TOTAL SCORE	→	217	440	954
GRAND TOTAL Add Total of Three Columns	→	1611 GRAND TOTAL		

Use Other Side to Record Each Players Scores

2 D 73

Pages 34–35

1. $320
2. $224
3. $880
4. $240
5. $960
6. Car 1: $480
   Car 2: $560
   Car 3: $640
   Car 4: $720
   Car 5: $640
   Car 6: $880
   Car 7: $960
   Car 8: $1040
7. a. $1280 [2 X 640 = 1280]
   b. $3200 [5 X 640 = 3200]
   c. $1520 [560 + 960 = 1520]
   d. $7600 [5 X 1520 = 7600]
   e. $5280 [720 + 1040 = 1760, 3 X 1760 = 5280]
8. a. $104 [936 - 832 = 104]
   b. $104 [832 - 728 = 104]
   c. $312 [1248 - 936 = 312]
   d. $728 [1352 - 624 = 728]
9. Mr. Leger: $8070 [5 X 864 = 4320, 3750 + 4320 = 8070]
   Ms. Todd: $7980 [5 X 576 = 2880, 5100 + 2880 = 7980]
   Ms. Wong: $10 390 [5 X 1152 = 5760, 4630 + 5760 = 10 390]
10. Ms. Wong

Pages 36–37

1. a. 3720 L [12 X 310]
   b. 1320 L [12 X 110]
   c. 5760 L [12 X 480]
   d. 6960 L [12 X 580]
   e. 1560 L [12 X 130]
   f. 3000 L [12 X 250]
   g. 1440 L [12 X 120]
   h. 3960 L [12 X 330]
   i. 3240 L [12 X 270]
   j. 11 400 L [12 X 950]
   k. 4200 L [12 X 350]
   l. 11 520 L [12 X 960]
   m. 6720 L [12 X 560]
   n. 2520 L [12 X 210]
2. a. 279 000 kg [900 X 310]
   b. 99 000 kg [900 X 110]
   c. 432 000 kg [900 X 480]
   d. 522 000 kg [900 X 580]
   e. 117 000 kg [900 X 130]
   f. 225 000 kg [900 X 250]
   g. 108 000 kg [900 X 120]
   h. 297 000 kg [900 X 330]
   i. 243 000 kg [900 X 270]
   j. 855 000 kg [900 X 950]
   k. 315 000 kg [900 X 350]
   l. 864 000 kg [900 X 960]
   m. 504 000 kg [900 X 560]
   n. 189 000 kg [900 X 210]
3. [Use the answers from exercise 2, removing the three zeros at the end of each number]
4. 5049 t
5. 5426 kg [10 470 - 5044 = 5426]
6. 7226 kg [12 778 - 5552 = 7226]
7. 8098 kg [14 596 - 6498 = 8098]
8. 8648 kg [15 988 - 7340 = 8648]
9. 7666 kg [13 876 - 6210 = 7666]
10. 6375 kg [11 862 - 5487 = 6375]
11. 141 372 cases
    [28 X 5049 = 141 372]
12. 3 392 928 cans
    [24 X 141 372 = 3 392 928]
13. $989 604 [7 X 141 372 = 989 604]

Page 39

1. 576 [3 X 192 = 576]
   768 [4 X 192 = 768]
2. 252 [6 X 6 X 7 = 252]
   504 [2 X 252 = 504]
   756 [3 X 252 = 756]
   1008 [4 X 252 = 1008]
3. 180 360 540 720
4. 216 432 648 864
5. 360 720 1080 1440
6. 117 234 351 468
7. 360 720 1080 1440
8. 6500 [7500 - 1000 = 6500]
9. 2100 [14 X 150 = 2100]
   2200 [2100 + 100 = 2200]
   1900 [2200 - 300 = 1900]
10. 1400 1500 1300
11. 4200 4400 3800
12. 2520 2670 2460
13. 8400 8800 8300
14. 3920 4100 3860
15. 2800 2880 2770

Page 40

Chapter Test

1. 420 000
2. 120 000
3. 126
4. 406
5. 32 868
6. 885
7. 1620
8. 522
9. 540 081
10. 5668
11. 393 600
12. 459 712
13. 160 605
14. 10 [18 - 8 = 10]
15. 53 [7(5) + 3(6) = 35 + 18 = 53]
16. 576 [3 X 192 = 576]
17. $3846 [467 + 815 = 1282, 3 X 1282 = 3846]
18. 5040 cases [28 X 180 = 5040]
19. 240 servings per hour
    [8 X 6 X 5 = 240]
20. 960 servings per hour
    [4 X 240 = 960]

Page 41

Pretest

A	7 R5	J	603 R7
B	28	K	70 R32
C	87 R1	L	2 R107
D	689 R2	M	5 R647
E	78 R5	N	10
F	4 R3	O	7
G	24 R27	P	$n = 85$
H	25 R5	Q	$x = 600$
I	68 R2		

Page 43

Set A

1. 7 R2	6. 8 R2
2. 6 R4	7. 3 R3
3. 7 R4	8. 5 R6
4. 5 R3	9. 6 R1
5. 7 R1	10. 9 R2

Set B

1. 19	6. 18 R1
2. 15	7. 17 R3
3. 46 R1	8. 13 R3
4. 28	9. 12 R1
5. 21 R1	10. 14

Set C

1. 29 R3	9. 235 R1
2. 238 R1	10. 86 R4
3. 83	11. 285
4. 121 R3	12. 58
5. 29 R2	13. 181 R1
6. 92 R2	14. 49 R7
7. 271 R1	15. 87
8. 36 R2	16. 189 R2

Set D

1. 1329	9. 1255 R5
2. 15 237 R5	10. 575
3. 316 R1	11. 3255 R1
4. 1329 R5	12. 16 671
5. 115 516 R7	13. 46 568 R3
6. 972 R1	14. 294 R6
7. 7663	15. 185 484 R1
8. 57 543 R1	16. 826 R6

17. 9365 R1
18. 223 793 R3
19. 3791 R6
20. 1813 R1

Set E

1. 1246 R4
2. 325 R1
3. 1156 R3
4. 154 R2
5. 26 R2
6. 8492 R3
7. 71 R1
8. 469 R5
9. 1368 R3
10. 23 R1
11. 925 R2
12. 95 R1
13. 22 839 R1
14. 64
15. 8 R1
16. 97 488
17. 137 R3
18. 13 631 R5
19. 78
20. 10 R5
21. 728 R4
22. 23 778 R2
23. 33 627 R2
24. 7358 R8
25. 5628 R5
26. 428 377

Page 45

Set F

1. 2 R7
2. 1 R7
3. 1 R11
4. 2 R16
5. 2 R10
6. 2 R6
7. 1 R15
8. 1 R25
9. 4
10. 2 R21

Set G

1. 33 R11
2. 4 R26
3. 14 R59
4. 4 R60
5. 16 R6
6. 5 R17
7. 5 R85
8. 20 R12
9. 46 R6
10. 11 R5
11. 2 R61
12. 9 R25
13. 6 R37
14. 68 R1
15. 3 R23
16. 23
17. 8 R15
18. 18 R8
19. 7 R4
20. 15 R31

Set H

1. 19 R2
2. 4 R28
3. 22 R8
4. 4 R54
5. 17 R39
6. 3 R23
7. 32 R12
8. 4 R14
9. 5 R18
10. 29 R14
11. 12 R3
12. 8 R2
13. 7 R74
14. 32 R10
15. 16 R5
16. 5 R5
17. 6 R20
18. 18 R40
19. 4 R23
20. 19 R13

Set I

1. 74 R39
2. 2283 R9
3. 173 R15
4. 363 R22
5. 477 R32
6. 75 R28
7. 2967 R35
8. 33 R13
9. 291 R12
10. 344 R18
11. 72 R9
12. 2223 R8
13. 2371 R38
14. 153 R6
15. 635 R56
16. 357 R14
17. 33 R66
18. 15 941 R13
19. 51 R10
20. 428 R8
21. 517 R36
22. 114 R58
23. 28 151 R6
24. 41 R70
25. 68 751 R24
26. 5297 R11
27. 6982 R52
28. 635 546 R9

Page 46

Set J

1. 305 R3
2. 60 R5
3. 705 R2
4. 961 R1
5. 2041 R6
6. 40 R2
7. 3602 R4
8. 7110
9. 61 R5
10. 30 R4
11. 604
12. 4003 R3
13. 520 R5
14. 2005 R2
15. 8020 R1
16. 790 R2
17. 4061 R4
18. 8009 R5

Set K

1. 107 R8
2. 60 R21
3. 30 R7
4. 10 R15
5. 206 R2
6. 50
7. 300 R5
8. 700 R27
9. 410
10. 2004 R11
11. 109 R67
12. 130 R4
13. 5602 R7
14. 70 R22
15. 202 R13
16. 860 R25
17. 206 R37
18. 4020 R12
19. 305 R33
20. 3006 R12

Page 47

Set L

1. 2 R297
2. 1 R36
3. 8 R19
4. 1 R209
5. 2 R264
6. 4 R81
7. 1 R56
8. 3 R79
9. 1 R106
10. 2 R220

Set M

1. 82 R219
2. 5 R322
3. 5 R490
4. 85 R322
5. 6 R147
6. 60 R360
7. 13 R271
8. 16 R125
9. 83 R389
10. 12 R427
11. 67 R132
12. 7 R394
13. 5 R115
14. 75 R78
15. 23 R139
16. 39 R46
17. 24 R241
18. 32 R484
19. 13 R24
20. 8 R314
21. 57 R376
22. 15 R68
23. 40 R273
24. 1806 R235
25. 4 R474
26. 177 R170
27. 550 R326
28. 870 R844

Page 48

Set N

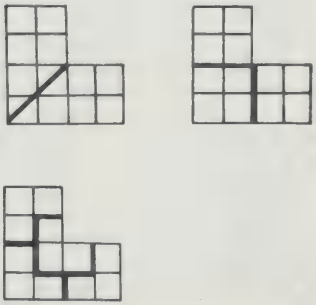
1. 10
2. 31
3. 2
4. 3
5. 27
6. 3
7. 18
8. 10
9. 3
10. 4
11. 8
12. 2
13. 0
14. 17

Page 49

Set O

1. 9
2. 3
3. 3
4. 7
5. 2
6. 4
7. 6
8. 0
9. 10
10. 9
11. 13
12. 23
13. 1
14. 17

Break Time:



Page 50

Set P

1. $n = 4$
2. $t = 18$
3. $r = 27$
4. $z = 25$
5. $b = 27$
6. $n = 11$
7. $c = 26$
8. $q = 42$
9. $y = 35$
10. $d = 9$
11. $v = 16$
12. $e = 1$
13. $y = 0$
14. $u = 3$
15. $g = 5$
16. $w = 94$
17. $c = 6$
18. $t = 5$
19. $y = 14$
20. $x = 85$
21. $d = 8$
22. $h = 7$
23. $m = 11$
24. $a = 14$
25. $w = 17$

Page 51

Set Q

1. $x = 294$
2. $n = 75$
3. $w = 169$
4. $y = 1800$
5. $k = 108$
6. $m = 1280$
7. $n = 75$
8. $k = 294$
9. $t = 98$
10. $n = 800$
11. $b = 217$
12. $v = 427$
13. $n = 192$
14. $v = 475$
15. $g = 432$
16. $e = 52$
17. $s = 80$
18. $t = 488$
19. $m = 90$
20. $v = 75$
21. $d = 630$
22. $x = 315$
23. $m = 92$
24. $n = 546$
25. $t = 4500$
26. $b = 1560$
27. $c = 825$
28. $s = 1488$

Break Time: 18 min

Page 52

Posttest

A 7 R3
B 36 R1
C 39
D 846 R2
E 132
F 3 R8
G 36 R18
H 6 R7
I 55 R20
J 607 R1
K 570 R8
L 2 R94
M 15 R49
N 4
O 16
P $n = 8$
Q $x = 72$

Page 53

1. $12 840 \div 12$ = $1070.00; $12 840 \div 52$ = $246.92
2. $1290.00 $297.69
3. $1291.67 $298.08
4. $1141.67 $263.46
5. $715.83 $165.19
6. $812.92 $187.60
7. $1156.67 $266.92
8. $785.42 $181.25
9. $957.50 $220.96
10. $986.25 $227.60
11. $1110.00 $256.15
12. $1250.00 $288.46
13. $999.17 $230.58
14. $1041.67 $240.38
15. $1025.00 $236.54

Page 55

1. 26 ¢ [51 ÷ 2 = 25 R1]
2. 25 ¢ [74 ÷ 3 = 24 R2]
3. 17 ¢ [84 ÷ 5 = 16 R4]
4. 26 ¢ [76 ÷ 3 = 25 R1]
5. 18 ¢ [89 ÷ 5 = 17 R4]
6. 44 ¢ [87 ÷ 2 = 43 R1]
7. 19 ¢ [75 ÷ 4 = 18 R3]
8. 18 ¢ [52 ÷ 3 = 17 R1]
9. 19 ¢ [92 ÷ 5 = 18 R2]
10. 12 ¢ [69 ÷ 6 = 11 R3]
11. 33 ¢ [98 ÷ 3 = 32 R2]
12. 22 ¢ [87 ÷ 4 = 21 R3]
13. 45 ¢ [89 ÷ 2 = 44 R1]
14. 27 ¢ [79 ÷ 3 = 26 R1]
15. 43 ¢ [85 ÷ 2 = 42 R1]
16. Brand Y [78 ÷ 4 = 19 R2, 94 ÷ 5 = 18 R4]
17. Brand X [51 ÷ 3 = 17, 73 ÷ 4 = 18 R1]
18. Brand X [97 ÷ 4 = 24 R1, 53 ÷ 2 = 26 R1]
19. Brand X [56 ÷ 3 = 18 R2, 98 ÷ 5 = 19 R3]
20. Brand Y [67 ÷ 3 = 22 R1, 86 ÷ 4 = 21 R2]
21. Brand Y [93 ÷ 4 = 24 R1, 46 ÷ 2 = 23]
22. Brand Y [72 ÷ 5 = 14 R2, 79 ÷ 6 = 13 R1]
23. Brand X [31 ÷ 2 = 15 R1, 84 ÷ 5 = 16 R4]
24. Brand X [89 ÷ 4 = 22 R1, 72 ÷ 3 = 24]
25. Brand Y [39 ÷ 3 = 13, 58 ÷ 5 = 11 R3]
26. Brand Y [99 ÷ 6 = 16 R3, 63 ÷ 4 = 15 R3]
27. Brand Y [59 ÷ 2 = 29 R1, 82 ÷ 3 = 27 R1]
28. Brand X [40 ÷ 3 = 13 R1, 87 ÷ 6 = 14 R3]
29. Brand X [56 ÷ 5 = 11 R1, 99 ÷ 8 = 12 R3]
30. Brand X [47 ÷ 2 = 23 R1, 75 ÷ 3 = 25]

Page 57

1. 1st coat: 10 L [130 ÷ 13 = 10]
   2nd coat: 8 L [130 ÷ 17 = 7 R11]
   Total: 18 L
2. 1st coat: 4 L [52 ÷ 13 = 4]
   2nd coat: 4 L [52 ÷ 17 = 3 R1]
   Total: 8 L
3. 1st coat: 9 L [117 ÷ 13 = 9]
   2nd coat: 7 L [117 ÷ 17 = 6 R15]
   Total: 16 L
4. 1st coat: 3 L [39 ÷ 15 = 2 R9]
   2nd coat: 3 L [39 ÷ 13 = 3]
   Total: 6 L
5. 1st coat: 26 L [130 ÷ 5 = 26]
   2nd coat: 22 L [130 ÷ 6 = 21 R4]
   Total: 48 L
6. 1st coat: 8 L [96 ÷ 12 = 8]
   2nd coat: 8 L [96 ÷ 12 = 8]
   Total: 16 L
7. 1st coat: 2 L [22 ÷ 11 = 2]
   2nd coat: 2 L [22 ÷ 15 = 1 R7]
   Total: 4 L
8. 1st coat: 18 L [72 ÷ 4 = 18]
   2nd coat: 12 L [72 ÷ 6 = 12]
   Total: 30 L
9. 1st coat: 8 L [32 ÷ 4 = 8]
   2nd coat: 6 L [32 ÷ 6 = 5 R2]
   Total: 14 L
10. 1st coat: 18 L [216 ÷ 12 = 18]
    2nd coat: 17 L [216 ÷ 13 = 16 R8]
    Total: 35 L

Pages 58–59

1. 12
   [72 ÷ 6 = 12]
2. 840 720
   [60 X 14 = 840] [60 X 12 = 720]
3. 6720 5760
4. 33 600 28 800
5. 39 cases [3 X 13 = 39]
6. 65 cases [5 X 13 = 65]
7. 1560 cases [2 X 780 = 1560]
8. 140 cases [10 X 14 = 140]
9. 134 400 cases
   [4 X 33 600 = 134 400]
10. 3600 cases [5 X 720 = 3600]
11. 1 497 600 cases
    [52 X 28 800 = 1 497 600]
12. 6 min
    [Line 1; 78 ÷ 13 = 6]
13. 30 min
    [Line 3; 360 ÷ 12 = 30]
14. 18 min
    [Line 2; 252 ÷ 14 = 18]
15. 50 min
    [Line 1; 650 ÷ 13 = 50]
16. 7 min
    [Line 3; 84 ÷ 12 = 7]
17. 90 min
    [Line 1; 1170 ÷ 13 = 90]
18. 45 min
    [Line 2; 630 ÷ 14 = 45]
19. 3600 cases [3 X 1200 = 3600]

20. 24 000 cases [20 X 1200 = 24 000]
21. 2000 cases [8 X 250 = 2000]
22. 9000 cases
[5 X 1200 = 6000,
12 X 250 = 3000,
6000 + 3000 = 9000]
23. 73 000 cases
[40 X 1200 = 48 000,
100 X 250 = 25 000]

Page 61

1. a. Happ's: $19 955
Greco's: $16 653
Lee's: $17 212
b. Happ's: $3991
[11 973 ÷ 3 = 3991]
Greco's: $2379
[7137 ÷ 3 = 2379]
Lee's: $4303
[12 909 ÷ 3 = 4303]
c. Happ's: 5
[19 955 ÷ 3991 = 5]
Greco's: 7
[16 653 ÷ 2379 = 7]
Lee's: 4
[17 212 ÷ 4303 = 4]
2. Happ's
3. Greco's

Page 62

Chapter Test

1. 7 R3
2. 25 R2
3. 49 R1
4. 490 R4
5. 165
6. 3 R9
7. 37
8. 23 R7
9. 50 R15
10. 604 R3
11. 30 R12
12. 2 R275
13. 40 R130
14. 9 [$\frac{36}{6} + \frac{24}{8} = 6 + 3 = 9$]
15. 1 [$\frac{16}{4} - \frac{15}{5} = 4 - 3 = 1$]
16. $x = 24$ [$\frac{6x}{6} = \frac{144}{6} = 24$]
17. $y = 180$ [$(30)\frac{y}{30} = (30)6 = 180$]
18. $1027 [12 324 ÷ 12 = 1027]
19. 28 ¢ [82 ÷ 3 = 27 R1]
20. 11 L
[1st coat: 78 ÷ 13 = 6,
2nd coat: 78 ÷ 17 = 4 R10,
6 + 5 = 11]
21. 42 min [588 ÷ 14 = 42]
22. $1200 [3600 ÷ 3 = 1200]

Page 63

Skills Tune-up

1. 89
2. 98
3. 760
4. 250
5. 101
6. 859
7. 120
8. 220
9. 6052
10. 73
11. 4150
12. 80 727
13. 255
14. 1735
15. 62
16. 2539
17. 619
18. 7661
19. 6545
20. 4657
21. 2048
22. 18 326
23. 3769
24. 758
25. 20 157

1. 87
2. 1776
3. 15 500
4. 3780
5. 12 033
6. 7326
7. 81 500
8. 54 000
9. 1972
10. 20 790
11. 30 000
12. 183 378
13. 33 522
14. 46 288
15. 13 818
16. 9800
17. 1 200 000
18. 260 942
19. 10 950
20. 4 565 386
21. 106 398
22. 56 000 000
23. 515 570
24. 274 482
25. 4 119 276

1. 181
2. 50
3. 1812 R2
4. 305 R9
5. 34 R35
6. 9 R3
7. 600
8. 20 R33
9. 20 076
10. 45
11. 8
12. 9 R382
13. 35
14. 22 R376
15. 49 R10
16. 1070 R6
17. 90
18. 40 R17
19. 600
20. 50 R9
21. 809
22. 603
23. 35 R313
24. 63 R79
25. 189

Page 64

Calculator Exercises

1. 34 862
2. 186 055
3. 150 862
4. 310 174
5. 38 495
6. 16 312
7. 14 834
8. 17
9. 13 085
10. 44 439
11. 52 539
12. 213 458
13. 6 240 109
14. 7 845 576
15. 28 036 125
16. 9 788 961
17. 46 002 180
18. 20 439 048
19. 88 349 680
20. 11 111 103
21. 14 380 470
22. 75 892 176
23. 18 467 430
24. 88 896 528
25. 41 256
26. 451
27. 745
28. 6008
29. 8744
30. $593 765
31. 539 km, 1287 km, 950 km
32. $83, $74, $125

Page 67

Pretest

A ten thousandths
B 0.600
C $0.7 < 0.701$, or $0.701 > 0.7$
D 33.6
E 61.532
F 33.66
G 21.63
H 9.21
I 6.23
J 7.7
K 3.96

Page 69

Set A

1. hundredths
2. tenths
3. ten thousandths
4. ones

5. thousandths
6. tens
7. hundred thousandths
8. tenths
9. hundreds
10. millionths
11. hundredths
12. thousandths
13. tenths
14. thousands
15. millionths
16. thousandths
17. hundred thousandths
18. ten thousandths
19. ten thousands
20. hundred thousandths

Set B

1. 0.60, 0.600
2. 0.42, 0.420
3. 0.38, 0.380
4. 0.26, 0.260
5. 0.10, 0.100
6. 0.20, 0.200
7. 0.91, 0.910
8. 0.70, 0.700
9. 0.63, 0.630
10. 0.58, 0.580
11. 0.90, 0.900
12. 0.30, 0.300
13. 1.60, 1.600
14. 0.82, 0.820
15. 0.37, 0.370
16. 7.61, 7.610
17. 0.50, 0.500
18. 2.90, 2.900
19. 3.25, 3.250
20. 0.4, 0.400

Set C

1. $<$
2. $>$
3. $<$
4. $>$
5. $>$
6. $=$
7. $>$
8. $>$
9. $=$
10. $<$
11. $<$
12. $>$
13. $>$
14. $<$
15. $<$
16. $=$
17. $>$
18. $<$
19. $<$
20. $=$
21. $<$
22. $<$
23. $>$
24. $=$
25. $<$

Page 70

Set D

1. 18.7
2. 156.7
3. 15.18
4. 22.91
5. 0.207
6. 8.642
7. 278.3
8. 36.71
9. 19.857

Set E

1. 0.864
2. 0.896
3. 1.955
4. 10.713
5. 12.531
6. 40.542
7. 22.253
8. 38.461
9. 81.761
10. 31.807

Page 71

Set F

1. 7.9
2. 8.3
3. 9.9
4. 22.9
5. 1.38
6. 0.41
7. 9.35
8. 7.34
9. 5.71
10. 4.11
11. 0.876
12. 1.022
13. 4.723
14. 9.883
15. 9.802
16. 14.563
17. 1.2
18. 18.3
19. 2.05
20. 32.15
21. 1.928
22. 0.23
23. 11.907
24. 8.107
25. 2.6
26. 2.65

Set G

1. 3.69
2. 0.174
3. 2.939
4. 72.454
5. 3.027
6. 0.852
7. 32.93
8. 83.1
9. 9.102
10. 5.405
11. 1.188
12. 3.42
13. 2.122
14. 28.26
15. 4.153
16. 2.007
17. 11.415
18. 14.15
19. 8.358
20. 2.398
21. 12.141
22. 8.896
23. 19.23
24. 3.493
25. 10.442
26. 23.93

Break Time: You need move only the second glass. Pick it up and pour the liquid into the fifth glass.

Page 72

Set H

1. 2.4
2. 6.9
3. 0.39
4. 5.08
5. 1.85
6. 3.88
7. 0.521
8. 0.726
9. 0.684
10. 7.059
11. 3.288
12. 0.643

Set I

1. 4.04
2. 2.07
3. 3.65
4. 1.87
5. 1.62
6. 2.29
7. 0.218
8. 0.382
9. 0.191
10. 2.588
11. 4.881
12. 3.811

Page 73

Set J

1. 1.4
2. 1.4
3. 3.6
4. 3.7
5. 0.17
6. 0.69
7. 2.56
8. 1.87
9. 1.78
10. 5.87
11. 3.87
12. 4.89
13. 5.89
14. 10.79
15. 8.86
16. 0.479
17. 0.267
18. 1.087
19. 0.889
20. 2.887
21. 1.382
22. 3.619
23. 4.889
24. 3.877
25. 20.917
26. 6.652
27. 0.7315
28. 0.0421

Set K

1. 6.15
2. 3.56
3. 4.2
4. 2.87
5. 2.15
6. 1.97
7. 4.126
8. 3.847
9. 2.085
10. 3.168
11. 3.104
12. 2.089
13. 4.266
14. 4.068
15. 3.539
16. 2.781
17. 2.279
18. 2.3
19. 4.224
20. 14.995
21. 5.175
22. 0.114
23. 14.588
24. 12.64
25. 12.305
26. 11.389
27. 0.9052
28. 0.001

Break Time: 13 candles

Page 74

Posttest

A thousandths
B 0.200
C $0.9 > 0.091$, or $0.091 < 0.9$
D 25.3
E 41.357
F 22.19
G 18.95
H 7.11
I 6.55
J 5.6
K 1.95

Page 75

1. $11.20 [29.95 - 18.75 = 11.20]
2. $15.00 [31.95 - 16.95 = 15.00]
3. $15.55 [42.95 - 27.40 = 15.55]
4. $19.10 [42.95 - 23.85 = 19.10]
5. $20.05 [54.95 - 34.90 = 20.05]
6. $28.45 [74.95 - 46.50 = 28.45]
7. $30.10 [89.95 - 59.85 = 30.10]
8. $30.75 [99.50 - 68.75 = 30.75]

Page 77

1. $101.12
2. $123.71
3. $818.26
4. $576.81
5. $884.96
6. $767.38
7. $1193.46
8. $775.09
9. $826.72
10. $1340.84
11. $12 318.36
12. $18 687.10

Page 79

1. Nov. 8, 1977
2. Dr. M. J. Haynes
3. $29.64
4. Twenty-nine and $\frac{64}{100}$
5. $176.75
   [215.36 - 38.61 = 176.75]
6. $432.89
   [782.65 - 349.76 = 432.89]
7. $807.44
   [524.79 + 282.65 = 807.44]
8. $690.69
   [807.44 - 116.75 = 690.69]
9. $513.30
   [475.16 + 38.14 = 513.30]
   $269.32
   [513.30 — 243.98 = 269.32]
10. $154.64
    [269.32 - 114.68 = 154.64]
11. $530.47
    [154.64 + 375.83 = 530.47]
    $417.51
    [530.47 - 112.96 = 417.51]

Page 81

1. 6.426 cm
   [1.38 + 5.046 = 6.426]
2. 2.01 cm
   [0.83 + 0.76 + 0.42 = 2.01]
3. 6.992 cm [1.125 + 0.8 + 3.142 + 0.8 + 1.125 = 6.992]
4. 2.272 cm
   [0.752 + 0.683 + 0.837 = 2.272]
5. 3.25 cm
   [1.5 + 1.75 = 3.25]
6. 1.7 cm
   [0.25 + 1.2 + 0.25 = 1.7]
7. 7.25 cm
   [8.75 - 1.5 = 7.25]
8. 18.2 cm
   [25.7 - 3.75 - 3.75 = 18.2]
9. 3.342 cm
   [4.036 - 0.347 - 0.347 = 3.342]
10. 3.472 cm
    [0.496 + 2.48 + 0.496 = 3.472]
11. 0.53 cm
    [1.46 - 0.465 - 0.465 = 0.53]

Page 82

Chapter Test

1. ten thousandths
2. 0.900
3. $0.89 > 0.8$, or $0.8 < 0.89$
4. 21.1
5. 9.618
6. 45.82
7. 16.23
8. 11.14
9. 2.255
10. 7.09
11. 18.92
12. $683.38
13. $718.17
    [819.65 - 101.48 = 718.17]
14. $796.79
    [725.09 + 368.45 = 1093.54, 1093.54 - 296.75 = 796.79]
15. 6.26 cm
    [1.25 + 3.76 + 1.25 = 6.26]
16. 10.92 cm
    [13.17 - 2.25 = 10.92]

Page 83

Pretest

A 219.76
B 0.036 05
C 2.496
D 4.86
E 0.071
F 0.59
G 361.5
H 4700
I 89.64
J 0.092
K 52.3
L 140
M 15
N 0.4
O 2.56
P 0.013
Q 3.2
R 0.38
S 0.072

Page 84

Set A

1. 82.08
2. 366.3
3. 36.54
4. 0.798
5. 4.55
6. 30.03
7. 298.2
8. 51.84
9. 11.256
10. 3600
11. 114.72
12. 54.56
13. 7.56
14. 181.44
15. 26.22
16. 252
17. 3.978
18. 15.6
19. 428.96
20. 28.62
21. 132.804
22. 7262.7
23. 115.84
24. 156.154
25. 16.252
26. 3.804
27. 21.3248
28. 1293.1

Page 85

Set B

1. 0.0603
2. 0.0504
3. 0.022 12
4. 0.000 44
5. 0.0234
6. 0.0019
7. 0.000 256 8
8. 0.060 84
9. 0.028 416
10. 0.056 52
11. 0.004 62
12. 0.001 913 6
13. 0.014 597 6
14. 0.027 45
15. 0.055 872
16. 0.002 378
17. 0.067 58
18. 0.025 998
19. 0.016 547 4
20. 0.032 346 6
21. 0.001 077 8
22. 0.009 205 3
23. 0.050 76
24. 0.064 522 5
25. 0.036 381
26. 0.002 854 8
27. 0.005 268 3
28. 0.067 665 84

Set C

1. 229.77
2. 1.45
3. 1.088
4. 3.6054
5. 9.116
6. 0.0384
7. 30.84
8. 2.5092
9. 0.0143
10. 2.6367
11. 0.1008
12. 960
13. 3.246
14. 1500
15. 4.844
16. 0.001 707 3
17. 0.7802
18. 9.18
19. 2904
20. 1.019 73
21. 0.2124
22. 1.989
23. 0.3192
24. 333.9
25. 0.0258
26. 227.5
27. 12.28
28. 1
29. 0.0874
30. 15.498
31. 0.010 14
32. 23.166
33. 0.88
34. 2.821
35. 0.1141
36. 4.56
37. 18.86
38. 0.0147
39. 7.2
40. 48
41. 118.8
42. 9.88
43. 2.415
44. 1.188
45. 2.835
46. 55.836
47. 236.5
48. 84.84
49. 336.8
50. 94
51. 30.87
52. 17.85
53. 3.68
54. 51.264
55. 669.6
56. 0.063 06

Page 86

Set D

1. 6.7
2. 5.7
3. 4.13
4. 0.94
5. 2.6
6. 5.6
7. 5.22
8. 0.114
9. 0.6587
10. 5.32
11. 2.16
12. 7.8
13. 3.7
14. 67.3
15. 0.3547
16. 5.44
17. 12.56
18. 1.6
19. 23.4
20. 94.1

Set E

1. 0.089
2. 0.06
3. 0.0048
4. 0.0073
5. 0.08
6. 0.0007
7. 0.059
8. 0.006
9. 0.023
10. 0.0054
11. 0.0228
12. 0.035
13. 0.0082
14. 0.0004
15. 0.0134
16. 0.003 794
17. 0.087
18. 0.003 99

Page 87

Set F

1. 5.39
2. 6.7
3. 0.035
4. 0.82
5. 3.42
6. 2.11
7. 0.008
8. 1.22
9. 95.9
10. 6.31
11. 46.9
12. 0.0071
13. 6.87
14. 0.5883
15. 0.0093
16. 2.49
17. 1.332
18. 0.0008
19. 3.04
20. 0.555
21. 40.1
22. 42.3
23. 0.0481
24. 2.7
25. 0.119
26. 9.03
27. 5.29
28. 0.446
29. 6.22
30. 4.79
31. 0.666
32. 0.437
33. 47.9
34. 57.1
35. 0.0034
36. 2.61
37. 0.585
38. 4.61
39. 0.008 796
40. 2.446
41. 0.29
42. 1.87
43. 0.009
44. 0.655
45. 52.4
46. 64.7
47. 2.47
48. 6.14
49. 45.8
50. 4.03
51. 33.8
52. 0.078
53. 0.653
54. 3.12
55. 40.1
56. 0.356

Break Time: Gleeps have and ● .

Page 88

Set G

1. 531.6
2. 108
3. 168.5
4. 349
5. 251
6. 16
7. 3004.2
8. 791
9. 124
10. 38.95
11. 269.55
12. 3517
13. 6420.1
14. 936.42
15. 1387
16. 204.8
17. 5392
18. 60.72
19. 7045.6
20. 12 895.6
21. 2775
22. 3861.08
23. 95.33
24. 465.112 35
25. 52 029.612

Page 89

Set H

1. 560
2. 251 800
3. 3740
4. 100 540
5. 68 100
6. 30
7. 21 590
8. 700
9. 73 510
10. 4610
11. 80
12. 8280
13. 1900
14. 60
15. 470
16. 125 670
17. 2080
18. 90
19. 930 200
20. 50 630
21. 780
22. 980
23. 738 100
24. 860
25. 2070
26. 900
27. 160
28. 589 030

Set I

1. 1.25
2. 3.7614
3. 0.1943
4. 0.248
5. 8.016
6. 2.8319
7. 5.0662
8. 0.933
9. 61.5215
10. 4.8045
11. 6.3344
12. 7.9715
13. 2.640 91
14. 1.187
15. 5.6027
16. 9.3521
17. 3.4219
18. 5.602
19. 0.45
20. 9.012
21. 43.44
22. 15.2
23. 63
24. 4.377 81
25. 306.02
26. 0.983 478
27. 52.91
28. 678.012

Set J

1. 0.0346
2. 0.0571
3. 0.017
4. 0.0093
5. 0.06
6. 0.0026
7. 0.0921
8. 0.005
9. 0.007 085
10. 0.003 06
11. 0.0002
12. 0.032
13. 0.0009
14. 0.000 453
15. 0.084
16. 0.08
17. 0.0149
18. 0.021
19. 0.000 019
20. 0.034 651
21. 0.047 09
22. 0.000 025
23. 0.03
24. 0.000 45
25. 0.006
26. 0.0391
27. 0.040 897
28. 0.000 06

Page 90

Set K

1. 4.6
2. 9
3. 5.49
4. 5.7
5. 6.4
6. 0.03
7. 16
8. 89.3
9. 5.5
10. 3.07
11. 419
12. 0.4
13. 3.9
14. 0.236
15. 4.1
16. 0.97
17. 0.853
18. 2.04
19. 84
20. 0.36

Set L

1. 38
2. 60
3. 705
4. 490
5. 250
6. 430
7. 800
8. 7810
9. 385
10. 860
11. 9300
12. 300
13. 56 080
14. 235
15. 2940
16. 5620
17. 410
18. 86 000

Page 91

Set M

1. 5.7
2. 0.004
3. 4
4. 0.3
5. 8.6
6. 53
7. 12.4
8. 450
9. 0.008
10. 8.7
11. 9.8
12. 0.07
13. 380
14. 90
15. 0.2354
16. 0.09
17. 0.34
18. 62
19. 0.021
20. 920
21. 15
22. 6000
23. 7
24. 0.56
25. 47
26. 5.9
27. 54
28. 1295
29. 0.003
30. 967
31. 5.8
32. 24.7
33. 3.006
34. 0.02
35. 5.1
36. 892
37. 3.2
38. 370
39. 0.61
40. 6500
41. 6.3
42. 43.79
43. 5
44. 26.71

45. 30
46. 2.4
47. 75.12
48. 49
49. 3.12
50. 0.009
51. 26
52. 324
53. 0.084
54. 59.3
55. 500
56. 5.264

Break Time: 4

Page 92

Set N

1. 2.3
2. 1.6
3. 0.1
4. 0.4
5. 47.2
6. 0.4
7. 101.3
8. 6.5
9. 72.4
10. 0.8
11. 27.2
12. 9.3
13. 0.9
14. 2.5
15. 12.0

Set O

1. 5.33
2. 0.62
3. 12.05
4. 6.12
5. 95.13
6. 0.39
7. 24.05
8. 3.16
9. 41.98
10. 0.01
11. 4.93
12. 0.40
13. 1.44
14. 28.66
15. 7.50

Set P

1. 0.004
2. 5.192
3. 0.285
4. 6.101
5. 0.428
6. 9.016
7. 0.205
8. 1.980
9. 8.338
10. 0.380
11. 7.253
12. 0.626
13. 0.008
14. 71.114
15. 2.436

Page 93

Set Q

1. 472.3
2. 0.4
3. 54.3
4. 3.5
5. 6.1
6. 4.8
7. 0.6
8. 79.5
9. 1.5
10. 0.9

Set R

1. 24.09
2. 0.12
3. 0.37
4. 0.04
5. 0.19
6. 1.08
7. 4.24
8. 2.55

Set S

1. 0.264
2. 0.063
3. 1.408
4. 0.597
5. 6.253
6. 0.056
7. 0.464
8. 0.329

Page 94

Posttest

A 11.025
B 0.0368
C 0.1036
D 21.68
E 0.0059
F 6.1
G 569.2
H 800
I 3.952
J 0.0023
K 3.2
L 560
M 3.4
N 19.4
O 0.15
P 0.309
Q 1.9
R 0.35
S 0.237

Page 95

1. $6.62 [1.3 X 5.09 = 6.617]
2. $7.57 [1.9 X 3.98 = 7.562]
3. $14.58 [2.0 X 7.29 = 14.58]
4. $7.35 [1.6 X 4.59 = 7.344]
5. $4.34 [0.7 X 6.19 = 4.333]
6. $2.34 [0.9 X 2.59 = 2.331]
7. $4.17 [1.9 X 2.19 = 4.161]
8. $5.21 [1.8 X 2.89 = 5.202]
9. $1.97 [1.1 X 1.79 = 1.969]
10. $1.19 [0.7 X 1.69 = 1.183]
11. $4.47 [1.5 X 2.98 = 4.47]
12. $1.39 [1.4 X .99 = 1.386]
13. $42.80
14. $18.40
15. $24.40 [42.80 – 18.40 = 24.40]

Pages 96–97

1. $609 [0.42 X 14.5 = 6.09]
2. $17.45
3. $1.35
4. $0.92
5. $2.63
6. $0.46
7. $2.79
8. $1.32
9. $2.87
10. $1.32
11. $0.72
12. $37.92
13. $7.23 [0.42 X 17.2 = 7.224]
14. $26.32
15. $1.80
16. $1.24
17. $4.76
18. $2.07
19. $0.62
20. $1.24
21. $5.85
22. $1.45
23. $1.01
24. $53.59
25. $15.67

Page 99

1. $1369.71
   [3 X 456.57 = 1369.71]
   $6175.71
   [4806.00 + 1369.71 = 6175.71]
   $171.55
   [6175.71 ÷ 36 = 171.5475]
2. $1527.03 $6885.03 $191.26
3. $1222.83 $5512.83 $153.14
4. $1130.70 $5098.05 $141.62
5. $2666.61 $12 023.11 $333.98
6. $1141.43
   [2.5 X 456.57 = 1141.425]
   $5947.43
   [4806.00 + 1141.43 = 5947.43]
   $198.25
   [5947.43 ÷ 30 = 198.247...]
7. $ 1272.53 $ 6630.53 $ 221.02
8. $ 1019.03 $ 5309.03 $ 176.97
9. $ 942.25 $ 4909.60 $ 163.66
10. $ 2222.18 $11 578.68 $ 385.96
11. $913.14
    [2 X 456.57 = 913.14]
    $5719.14
    [4806.00 + 913.14 = 5719.14]
    $238.30
    [5719.14 ÷ 24 = 238.2975]
12. $1018.02 $6376.02 $265.67
13. $ 815.22 $5105.22 $212.72
14. $ 753.80 $4721.15 $196.72
15. $1777.74 $11 134.24 $463.93

Page 101

1. 13.5 [90 X 150 = 13 500,
   13 500 ÷ 1000 = 13.5]
   $0.54 [0.04 X 13.5 = 0.54]
2. 11.475 $0.46
3. 12 $0.48
4. 6.3 $0.26
5. 9.35 $0.38
6. 3 $0.12

7. 15.75 $0.63
8. 29.15 $1.17
9. 280.5 $11.22
10. 1.365 $0.06
11. 6.125 $0.25
12. 0.77 $0.04
13. 125 $5.00
14. 210.6 $8.43
15. 107.35 $4.30

Pages 102–103

1. 36 $117.00 [36 X 3.25 = 117]
2. 38 $95.00
3. 33 $106.59
4. 36.5 $164.25
5. 34.5 $163.88
6. 40 $157.60
7. 37 $170.94
8. 36.5 $101.47
9. 40 $150.40
10. 29.5 $95.88
11. 503 $171.02 [503 X 0.34 = 171.02]
12. 282 $183.30
13. 467 $158.78
14. 250 $142.50
15. 478 $152.96
16. 411 $147.96
17. 422 $181.46
18. 297 $222.75
19. 524 $167.68
20. 157 $153.86

Page 104

Chapter Test

1. 17.64
2. 0.037 73
3. 7.844
4. 2.47
5. 0.067
6. 2.9
7. 56.23
8. 1290
9. 46.032
10. 0.000.29
11. 9.4
12. 320
13. 0.59
14. 14.7
15. 0.07
16. 2.342
17. 1.4 [1.37 . . . ≐ 1.4]
18. 0.48 [0.4802 ≐ 0.48]
19. 0.026 [0.0257 . . . ≐ 0.026]
20. $1.75 [1.4 X 1.25 = 1.75]
21. $14.85 [9 X 1.65 = 14.85]
22. $169 [3 X 449.83 = 1349.49, 4734.51 + 1349.49 = 6084.00, 6084.00 ÷ 36 = 169.00]
23. $71.75 [0.07 X 1025 = 71.75]
24. $146.25 [32.5 X 4.50 = 146.25]
25. $158.72 [512 X 0.31 = 158.72]

Page 105

Pretest

A 5 cm
B 24 mm
C 18 cm
D 390
E 4.5 cm^2
F 450 mm^2
G 5 cm^3
H 5000 mm^3

Page 106

Pretest (continued)

I 180 mL
J 9200
K 454 g
L 36 000
M 23, 23
N 5, 5
O degrees Celsius
P – 3°C

Page 107

Set A

1. 3 cm
2. 5 cm
3. 4 cm
4. 6 cm
5. 2 cm
6. 3 cm
7. 6 cm
8. 1 cm
9. 5 cm
10. 4 cm

Set B

1. 36 mm
2. 52 mm
3. 7 mm
4. 24 mm
5. 46 mm
6. 61 mm
7. 17 mm
8. 29 mm
9. 56 mm
10. 39 mm

Page 109

Set C

1. 31 mm
2. 68 cm
3. 2 km
4. 4 m
5. 54 mm
6. 160 cm
7. 8 m
8. 348 km
9. 18 m
10. 76 m
11. 26 mm
12. 75 cm
13. 10 000 m

Set D

1. 38 000
2. 40
3. 0.758
4. 2.43
5. 8500
6. 7000
7. 1.55
8. 92.1
9. 1.245
10. 2.47
11. 1650
12. 1.475

Break Time: $1.19
3 quarters (or a fifty-cent piece and a quarter), 4 dimes, and 4 pennies

Page 110

Set E

1. 8 cm^2
2. 9 cm^2
3. 13 cm^2
4. 8.5 cm^2
5. 8.5 cm^2

Set F

1. 800 mm^2
2. 900 mm^2
3. 1300 mm^2
4. 850 mm^2
5. 850 mm^2

Page 111

Set G

1. 10 cm^3
2. 8 cm^3
3. 11 cm^3
4. 6 cm^3
5. 7.5 cm^3

Set H

1. 10 000 mm^3
2. 8000 mm^3
3. 11 000 mm^3
4. 6000 mm^3
5. 7500 mm^3

Page 112

Set I

1. 2L
2. 165 mL
3. 235 ml
4. 17 L
5. 250 mL
6. 400 L
7. 700 mL
8. 75 mL
9. 8 L
10. 500 mL
11. 50 L
12. 200 mL

Set J

1. 25 000
2. 0.435
3. 0.0827
4. 800
5. 375 000
6. 0.085
7. 5000
8. 0.0282
9. 4.370 or 4.37
10. 3200
11. 0.0834
12. 250

Page 113

Set K

1. 8 kg
2. 453 g
3. 5 g
4. 515 mg
5. 19 kg
6. 50 kg
7. 305 g
8. 170 kg
9. 5 g
10. 566 g
11. 380 mg
12. 7 kg

Set L

1. 38 000
2. 0.715
3. 400
4. 0.0672
5. 0.031
6. 283 000
7. 7000
8. 0.0458
9. 6.420 or 6.42
10. 9300
11. 0.850 or 0.85
12. 360

Page 114

Set M

1.	30	30
2.	8.2	8.2
3.	950	950
4.	7	7
5.	63	63
6.	0.4	0.4
7.	16.3	16.3
8.	12	12
9.	8.9	8.9
10.	250	250

Set N

1.	8	8
2.	5.6	5.6
3.	0.3	0.3
4.	2.45	2.45
5.	12.3	12.3
6.	30	30
7.	85	85
8.	16	16
9.	0.7	0.7
10.	280	280

Page 115

Set O

1. °C
2. K
3. °C
4. °C
5. K
6. °C
7. °C
8. °C
9. °C
10. K

Set P

1. 58°C
2. 20°C
3. 100°C
4. −7°C
5. 10°C
6. 13°C
7. 4°C
8. 40°C
9. 0°C
10. 18°C
11. 15°C
12. 8°C

Page 116

Posttest

A 6 cm
B 32 mm
C 9 m
D 653
E 3.5 cm^2
F 350 mm^2
G 4.5 cm^3
H 4500 mm^3

Page 117

Posttest (continued)

I	80 L	K	500 g	O	°C
J	7350	L	4600	P	9°C

M 9.1, 9.1
N 35, 35

Pages 118–119

1. 495 g cracker crumbs
   [3 X 165 = 495]
   21 g baking powder
   3 eggs
   375 mL milk
   225 mL corn oil
   150 mL corn syrup
   165 g pecans
2. 2
3. 12 lasagna noodles
   [2 X 6 = 12]
   2 mL oregano
   1000 g spaghetti sauce with meat
   500 mL cottage cheese
   360 g mozzarella cheese
4. 3 lasagna noodles
   [6 ÷ 2 = 3]
   0.5 mL oregano
   250 g spaghetti sauce with meat
   125 mL cottage cheese
   90 g mozzarella cheese
5. 6
6. 600 g shortening
   [6 X 100 = 600]
   840 g sugar
   12 eggs
   30 mL vanilla extract
   18 g salt
   12 g baking powder
   900 g flour
   480 g high-protein cereal
7. 0.25 kg ground beef
   [0.5 ÷ 2 = 0.25]
   15 mL green pepper
   30 mL onion
   40 mL catsup
   7.5 mL horseradish
   3.5 mL dry mustard
   1 mL salt
8. 50 g shortening
   [100 ÷ 2 = 50]
9. 1 kg ground beef
   [0.5 X 2 = 1]

Page 121

1.	0.35	$0.62 [0.35 X 1.75 = 0.6125]
2.	1.50	$3.23 [1.50 X 2.15 = 3.225]
3.	- - -	$10.60
4.	1.40	$4.62 [1.40 X 3.30 = 4.62]

5. 0.35 $0.60
[0.35 X 1.70 = 0.595]
6. 1.15 $2.65
[1.15 X 2.30 = 2.645]
7. - - - $9.36
8. $1.24 [10.60 - 9.36 = 1.24]
9. 1.85 $6.46
[1.85 X 3.49 = 6.4565]
10. 0.50 $0.88
[0.50 X 1.75 = 0.875]
11. 1.60 $3.67
[1.60 X 2.29 = 3.664]
12. - - - $13.16

Page 123

1. *T* = 16 mm
L = 25 mm
D = 6 mm
2. *T* = 15 mm
L = 23 mm
D = 5 mm
3. *T* = 19 mm
L = 34 mm
D = 8 mm
4. *T* = 13 mm
L = 26 mm
D = 7 mm
5. *T* = 25 mm
L = 38 mm
D = 11 mm
6. *T* = 15 mm
L = 25 mm
D = 6 mm
7. *T* = 15 mm
L = 23 mm
D = 5 mm
8. *T* = 13 mm
L = 23 mm
D = 5 mm
9. 3.3 [4.0 - 0.7 = 3.3]
10. 4.2 [5.0 - 0.8 = 4.2]
11. 5.0 [6.0 - 1.0 = 5.0]
12. 6.75 [8.0 - 1.25 = 6.75]
13. 8.5 [10.0 - 1.5 = 8.5]
14. 10.25 [12.0 - 1.75 = 10.25]
15. 14.0 [16.0 - 2.0 = 14.0]
16. 17.5 [20.0 - 2.5 = 17.5]
17. 21.0 [24.0 - 3.0 = 21.0]
18. 26.5 [30.0 - 3.5 = 26.5]
19. 32.0 [36.0 - 4.0 = 32.0]

Pages 124-125

1. 0.5 mg [24 ÷ 6 = 4,
4 X 0.125 = 0.5]
2. 60 mg [24 ÷ 4 = 6,
6 X 10 = 60]
3. 20 mg [24 ÷ 6 = 4,
4 X 5 = 20]
4. 3000 mg [24 ÷ 4 = 6,
6 X 500 = 3000]
5. 180 cm^3 [24 ÷ 4 = 6,
6 X 30 = 180]
6. 20 cm^3 [24 ÷ 6 = 4,
4 X 5 = 20]
7. 60 mg [24 ÷ 4 = 6,
6 X 10 = 60]
8. 0.3 g [24 ÷ 8 = 3,
3 X 0.1 = 0.3]
9. 500 mg [24 ÷ 12 = 2,
2 X 250 = 500]
10. 3 g [24 ÷ 8 = 3,
3 X 1 = 3]
11. 260 mg [24 ÷ 6 = 4,
4 X 65 = 260]
12. 3000 mg [24 ÷ 4 = 6,
6 X 500 = 3000]
13. 500 mg [24 ÷ 24 = 1,
1 X 500 = 500]
14. 300 mg [24 ÷ 6 = 4,
4 X 75 = 300]
15. 50 [5 X 1000 = 5000,
5000 ÷ 100 = 50]
16. 50 [1 X 1000 = 1000,
1000 ÷ 20 = 50]
17. 200 [1 X 1000 = 1000,
1000 ÷ 5 = 200]
18. 1000 [2 X 1000 = 2000,
2000 ÷ 2 = 1000]
19. 500 [5 X 1000 = 5000,
5000 ÷ 10 = 500]
20. 250 [1 X 1000 = 1000,
1000 ÷ 4 = 250]

Page 126

Chapter Test

1. 3 cm
2. 17 mm
3. 12 m
4. 6520
5. 5 cm^2
6. 500 mm^2
7. 2 cm^3
8. 2000 mm^3
9. 6 L
10. 8250
11. 15 kg
12. 4500
13. 4, 4
14. 9, 9
15. °C
16. 6°C
17. 450 mL [3 X 150 = 450]
18. $5.25 [1.5 X 3.50 = 5.25]
19. *T* = 14 mm, *L* = 25 mm, *D* = 6 mm
20. 150 g [24 ÷ 4 = 6,
6 X 25 = 150]

Page 127

Skills Tune-up

1. 48 R1
2. 1455 R2
3. 2 R20
4. 12 R41
5. 65 R7
6. 133 R29
7. 321 R1
8. 1 R417
9. 5 R260
10. 64 R3
11. 25 R12
12. 340 R15
13. 3094 R2
14. 4 R52
15. 130 R2
16. 182 R10
17. 42 R6
18. 246 R15
19. 31 874 R2
20. 115 R62
21. 6 R607
22. 96 935 R2
23. 65 R11
24. 231 R308

1. 13.7
2. 73.1
3. 1.20
4. 2.54
5. 7.491
6. 1.9
7. 10.428
8. 8.183
9. 3.812
10. 21.3
11. 11.423
12. 43.64
13. 5.6
14. 0.68
15. 20.869
16. 4.104
17. 3.081
18. 13.737
19. 0.498
20. 16.609
21. 30.363
22. 5.395
23. 21.44

24. 0.368
25. 61.797

1. 402.04
2. 6.696
3. 0.74
4. 4.2021
5. 35.67
6. 0.0217
7. 538.9
8. 3.9368
9. 12.56
10. 0.006
11. 0.0073
12. 62.15
13. 3900
14. 45.36
15. 0.0027
16. 5.5
17. 2.35
18. 7
19. 5.43
20. 0.23
21. 0.06
22. 0.05
23. 0.06
24. 2.49

Page 128

Calculator Exercises

1. 12 258.19
2. 185.6938
3. 16 837.92
4. 3185.017
5. 61.9
6. 8.809
7. 87.053
8. 152.53
9. 62.5583
10. 28.78
11. 7855.4
12. 590.56
13. 18.790 92
14. 718.215
15. 4015.0552
16. 6.286 504
17. 135.828
18. 136.369 42
19. 285.69
20. 66.64
21. 2.102
22. 6.169
23. 0.187
24. 8.404
25. 1.958
26. 0.417
27. $661.01
28. 19¢, 21¢; Brand X
29. 25¢, 24¢; Brand Y
30. 35¢, 33¢; Brand Y
31. 8¢, 10¢; Brand X
32. 355 km
33. 476 km
34. 384 km
35. 340 km
36. 304 km

Page 131

Pretest

A $\frac{3}{5}$
B $7\frac{2}{3}$
C $\frac{2}{5}$
D $8\frac{1}{2}$
E $\frac{27}{4}$
F 0.4
G 0.467
H $\frac{10}{21}$
I $\frac{2}{3}$
J $\frac{1}{4}$
K 10
L $1\frac{4}{5}$
M 40
N $6\frac{3}{8}$
O 9
P $\frac{9}{2}$
Q $1\frac{1}{5}$
R $\frac{7}{60}$
S $1\frac{3}{11}$

Page 132

Set A

1. $\frac{2}{5}$
2. $\frac{3}{8}$
3. $\frac{7}{12}$
4. $\frac{8}{16}$
5. $\frac{5}{10}$

Page 133

Set A (continued)

6. $\frac{5}{6}$
7. $\frac{1}{4}$
8. $\frac{2}{3}$
9. $\frac{5}{8}$
10. $\frac{3}{10}$

Set B

1. $5\frac{2}{3}$
2. $1\frac{1}{2}$
3. $6\frac{3}{4}$
4. $9\frac{1}{4}$
5. $3\frac{2}{5}$
6. $2\frac{2}{3}$
7. $2\frac{1}{4}$
8. $6\frac{2}{5}$
9. $4\frac{1}{2}$
10. $1\frac{5}{6}$

Page 134

Set C

1. $\frac{2}{3}$
2. $\frac{1}{4}$
3. $\frac{1}{2}$
4. $\frac{1}{3}$
5. $\frac{3}{4}$
6. $\frac{1}{8}$
7. $\frac{3}{5}$
8. $\frac{3}{5}$
9. $\frac{5}{6}$
10. $\frac{3}{5}$
11. $\frac{3}{16}$
12. $\frac{8}{9}$
13. $\frac{3}{4}$
14. $\frac{2}{7}$
15. $\frac{1}{3}$

Set D

1. $21\frac{4}{5}$
2. $5\frac{3}{4}$
3. $6\frac{1}{3}$
4. $8\frac{1}{9}$
5. 5
6. $6\frac{1}{2}$
7. 24
8. $9\frac{5}{6}$
9. $14\frac{2}{3}$
10. $32\frac{5}{6}$
11. $28\frac{3}{10}$
12. 13

Set E

1. $\frac{43}{3}$
2. $\frac{7}{5}$
3. $\frac{31}{4}$
4. $\frac{259}{10}$
5. $\frac{97}{16}$
6. $\frac{31}{8}$
7. $\frac{23}{9}$
8. $\frac{59}{6}$
9. $\frac{44}{5}$
10. $\frac{25}{2}$
11. $\frac{85}{8}$
12. $\frac{65}{3}$
13. $\frac{85}{16}$
14. $\frac{73}{2}$
15. $\frac{343}{4}$

Page 135

Set F

1. 0.25
2. 0.3125
3. 0.75
4. 0.6
5. 0.7
6. 0.2
7. 0.05
8. 0.625
9. 0.5
10. 0.031 25
11. 0.8
12. 0.375
13. 0.9
14. 0.15
15. 0.17
16. 0.1875
17. 0.0125
18. 0.013
19. 0.4375
20. 0.475
21. 0.55
22. 0.32
23. 0.18
24. 0.5625

Set G

1. 0.333
2. 0.286
3. 0.111
4. 0.583
5. 0.667
6. 0.364
7. 0.067
8. 0.222
9. 0.833
10. 0.417
11. 0.429
12. 0.267
13. 0.818
14. 0.083
15. 0.056
16. 0.571
17. 0.556
18. 0.917
19. 0.857
20. 0.889
21. 0.944
22. 0.238
23. 0.176
24. 0.684

Page 136

Set H

1. $\frac{8}{15}$
2. $\frac{3}{32}$
3. $\frac{5}{18}$
4. $\frac{15}{32}$
5. $\frac{2}{35}$
6. $\frac{3}{16}$
7. $\frac{7}{48}$
8. $\frac{21}{40}$
9. $\frac{11}{48}$
10. $\frac{27}{70}$

Set I

1. $\frac{3}{10}$
2. $\frac{4}{15}$
3. $\frac{5}{14}$
4. $\frac{5}{22}$
5. $\frac{5}{18}$
6. $\frac{3}{20}$
7. $\frac{3}{4}$
8. $\frac{1}{12}$
9. $\frac{1}{4}$
10. $\frac{7}{16}$
11. $\frac{3}{8}$
12. $\frac{7}{10}$
13. $\frac{9}{16}$
14. $\frac{2}{3}$
15. $\frac{7}{15}$
16. $\frac{3}{8}$
17. $\frac{1}{3}$
18. $\frac{1}{3}$
19. $\frac{3}{5}$
20. $\frac{1}{12}$
21. $\frac{3}{10}$
22. $\frac{1}{16}$
23. $\frac{1}{12}$
24. 1

Page 137

Set J

1. $\frac{8}{15}$
2. $\frac{1}{4}$
3. $\frac{2}{15}$
4. $\frac{5}{24}$
5. $\frac{9}{40}$
6. $\frac{3}{20}$
7. $\frac{4}{15}$
8. $\frac{5}{16}$
9. $\frac{1}{4}$
10. $\frac{21}{256}$
11. $\frac{1}{6}$
12. $\frac{7}{30}$
13. $\frac{2}{21}$
14. $\frac{1}{16}$
15. $\frac{1}{30}$
16. $\frac{3}{22}$
17. $\frac{5}{21}$
18. $\frac{3}{5}$
19. $\frac{10}{147}$
20. $\frac{15}{64}$

Set K

1. 12
2. 4
3. $1\frac{1}{2}$
4. 10
5. $7\frac{1}{2}$
6. $21\frac{1}{3}$
7. 24
8. $4\frac{2}{7}$
9. 35
10. $5\frac{1}{7}$
11. 10
12. 45
13. 60
14. $3\frac{1}{3}$
15. $3\frac{3}{10}$
16. 21
17. $2\frac{4}{5}$
18. $2\frac{2}{3}$
19. 35
20. 24
21. $5\frac{7}{10}$
22. 4
23. $20\frac{1}{4}$
24. $8\frac{2}{5}$
25. 6
26. $9\frac{9}{10}$
27. 28
28. 37
29. $4\frac{3}{8}$
30. 47
31. 100
32. 42
33. 250
34. $87\frac{1}{2}$
35. 50
36. $22\frac{1}{2}$
37. 15
38. 6000
39. 4800
40. 900

Page 138

Set L

1. $\frac{7}{8}$
2. $2\frac{5}{14}$
3. $\frac{17}{30}$
4. $1\frac{5}{6}$
5. 1
6. 1
7. $1\frac{1}{9}$
8. 5
9. $5\frac{3}{7}$
10. $5\frac{3}{5}$
11. $2\frac{7}{8}$
12. $2\frac{1}{2}$
13. $4\frac{1}{2}$
14. $1\frac{1}{2}$
15. $7\frac{13}{20}$
16. 8
17. 1
18. 265

Set M

1. 33
2. $7\frac{1}{2}$
3. $21\frac{1}{3}$
4. $38\frac{1}{2}$
5. 27
6. 30
7. 99
8. 72
9. $22\frac{3}{4}$
10. 75
11. $13\frac{2}{3}$
12. $13\frac{4}{5}$
13. 146
14. $23\frac{2}{5}$
15. 370
16. 92
17. 18
18. 95
19. 33
20. 320

Page 139

Set N

1. $4\frac{7}{8}$
2. $6\frac{2}{3}$
3. 12
4. $5\frac{2}{3}$
5. $4\frac{1}{5}$
6. 5
7. $24\frac{2}{5}$
8. $13\frac{1}{3}$
9. 6
10. 15
11. $2\frac{1}{2}$
12. 35
13. $13\frac{3}{4}$
14. 5
15. $18\frac{3}{4}$
16. $14\frac{2}{3}$
17. $6\frac{7}{8}$
18. 9
19. 10
20. $23\frac{3}{4}$

Set O

1. $8\frac{3}{4}$
2. 275
3. $\frac{17}{28}$
4. 14
5. 16
6. $6\frac{2}{3}$
7. 25
8. 4
9. $3\frac{1}{12}$
10. $28\frac{1}{2}$

Break Time: 54 posters

Page 140

Set P

1. $\frac{4}{3}$
2. $\frac{1}{12}$
3. $\frac{9}{1}$
4. $\frac{2}{5}$
5. $\frac{1}{6}$
6. $\frac{8}{29}$
7. $\frac{5}{4}$
8. $\frac{1}{52}$
9. $\frac{100}{7}$
10. $\frac{3}{14}$
11. $\frac{4}{29}$
12. $\frac{10}{9}$
13. $\frac{7}{34}$
14. $\frac{3}{31}$
15. $\frac{16}{7}$
16. $\frac{9}{11}$
17. $\frac{8}{29}$
18. $\frac{12}{11}$
19. $\frac{4}{63}$
20. $\frac{1}{99}$

Set Q

1. $\frac{7}{10}$
2. 12
3. $1\frac{1}{2}$
4. $1\frac{13}{27}$
5. $1\frac{1}{2}$
6. $1\frac{1}{8}$
7. $1\frac{1}{4}$
8. 14

Page 141

Set Q (continued)

9. $14\frac{2}{7}$
10. $\frac{3}{5}$
11. $1\frac{1}{4}$
12. $2\frac{2}{7}$
13. $\frac{11}{16}$
14. $\frac{7}{16}$
15. 32
16. $13\frac{1}{3}$
17. 1000
18. $\frac{7}{32}$
19. $\frac{27}{40}$
20. 18
21. $11\frac{1}{3}$
22. 20
23. $\frac{7}{10}$
24. $8\frac{2}{3}$
25. 1
26. $\frac{3}{14}$
27. 60
28. $\frac{3}{11}$
29. $7\frac{1}{3}$
30. $28\frac{4}{5}$

Set R

1. $\frac{3}{16}$
2. $\frac{3}{35}$
3. $\frac{2}{15}$
4. $\frac{1}{8}$
5. $\frac{3}{16}$
6. $\frac{1}{4}$
7. $\frac{1}{20}$
8. $\frac{5}{12}$
9. $\frac{2}{21}$
10. $\frac{1}{20}$
11. $\frac{1}{10}$
12. $\frac{1}{6}$

13. $\frac{5}{6}$ 19. $\frac{1}{100}$ 25. $\frac{7}{30}$

14. $\frac{4}{21}$ 20. $\frac{1}{32}$ 26. $\frac{1}{48}$

15. $\frac{3}{20}$ 21. $\frac{7}{16}$ 27. $\frac{3}{4}$

16. $\frac{1}{30}$ 22. $\frac{2}{5}$ 28. $\frac{1}{24}$

17. $\frac{1}{45}$ 23. $\frac{1}{100}$ 29. $\frac{5}{16}$

18. $2\frac{1}{2}$ 24. $\frac{1}{21}$ 30. $\frac{7}{12}$

Set S

1. $\frac{39}{56}$ 11. $1\frac{3}{7}$ 21. $2\frac{1}{2}$

2. $\frac{1}{2}$ 12. $1\frac{1}{3}$ 22. $\frac{3}{7}$

3. $\frac{8}{9}$ 13. $\frac{2}{5}$ 23. $1\frac{1}{2}$

4. $3\frac{1}{10}$ 14. $\frac{5}{9}$ 24. $\frac{7}{10}$

5. $\frac{1}{6}$ 15. $1\frac{3}{5}$ 25. $2\frac{11}{14}$

6. $1\frac{3}{19}$ 16. $\frac{4}{35}$ 26. $5\frac{1}{2}$

7. $\frac{3}{26}$ 17. 1 27. $2\frac{2}{7}$

8. 6 18. $8\frac{1}{4}$ 28. $1\frac{1}{8}$

9. $\frac{1}{14}$ 19. $\frac{3}{8}$ 29. $\frac{5}{28}$

10. $1\frac{4}{7}$ 20. $2\frac{2}{5}$ 30. 7

Page 142

Posttest

A $\frac{5}{9}$ K 16

B $11\frac{1}{4}$ L $\frac{7}{8}$

C $\frac{1}{2}$ M 44

D $4\frac{3}{8}$ N 6

E $\frac{13}{5}$ O $15\frac{2}{3}$

F 0.125 P $\frac{2}{3}$

G 0.143 Q $2\frac{2}{3}$

H $\frac{3}{10}$ R $\frac{23}{24}$

I $\frac{1}{6}$ S 2

J $\frac{1}{9}$

Page 143

1. $4\frac{1}{2}$ min [$3 \times 1\frac{1}{2} = 4\frac{1}{2}$]
2. $10\frac{1}{2}$ min [$7 \times 1\frac{1}{2} = 10\frac{1}{2}$]
3. 18 min [$12 \times 1\frac{1}{2} = 18$]
4. $2\frac{1}{4}$ min [$1\frac{1}{2} \times 1\frac{1}{2} = 2\frac{1}{4}$]
5. $8\frac{5}{8}$ min [$5\frac{3}{4} \times 1\frac{1}{2} = 8\frac{5}{8}$]
6. 2 laps [$3 \div 1\frac{1}{2} = 2$]
7. 4 laps [$6 \div 1\frac{1}{2} = 4$]
8. 7 laps [$10\frac{1}{2} \div 1\frac{1}{2} = 7$]
9. $8\frac{1}{2}$ laps [$12\frac{3}{4} \div 1\frac{1}{2} = 8\frac{1}{2}$]
10. 10 laps [$15 \div 1\frac{1}{2} = 10$]
11. $8\frac{1}{2}$ min [$2 \times 4\frac{1}{4} = 8\frac{1}{2}$]
12. $21\frac{1}{4}$ min [$5 \times 4\frac{1}{4} = 21\frac{1}{4}$]
13. $10\frac{5}{8}$ min [$2\frac{1}{2} \times 4\frac{1}{4} = 10\frac{5}{8}$]
14. $19\frac{1}{8}$ min [$4\frac{1}{2} \times 4\frac{1}{4} = 19\frac{1}{8}$]
15. $2\frac{1}{8}$ min [$\frac{1}{2} \times 4\frac{1}{4} = 2\frac{1}{8}$]
16. 4 laps [$17 \div 4\frac{1}{4} = 4$]
17. 5 laps [$21\frac{1}{4} \div 4\frac{1}{4} = 5$]
18. 2 laps [$8\frac{1}{2} \div 4\frac{1}{4} = 2$]
19. 3 laps [$12\frac{3}{4} \div 4\frac{1}{4} = 3$]
20. 9 laps [$38\frac{1}{4} \div 4\frac{1}{4} = 9$]

Page 145

1. 1.26 cm [$9 \times 0.14 = 1.26$]
2. 0.7 cm [$5 \times 0.14 = 0.7$]
3. 2.52 cm [$18 \times 0.14 = 2.52$]
4. 0.315 cm [$2\frac{1}{4} \times 0.14 = 0.315$]
5. 0.84 cm [$6 \times 0.14 = 0.84$]
6. 4.2 cm [$30 \times 0.14 = 4.2$]
7. 1.47 cm [$10\frac{1}{2} \times 0.14 = 1.47$]
8. 3.36 cm [$24 \times 0.14 = 3.36$]
9. 1.96 cm [$14 \times 0.14 = 1.96$]
10. 0.63 cm [$4\frac{1}{2} \times 0.14 = 0.63$]
11. 27.14 turns [$3.8 \div 0.14 = 27.14$]
12. 6.79 turns [$0.95 \div 0.14 = 6.79$]
13. 13.57 turns [$1.9 \div 0.14 = 13.57$]
14. 11.43 turns [$1.6 \div 0.14 = 11.43$]
15. 15 turns [$2.1 \div 0.14 = 15$]
16. 20.71 turns [$2.9 \div 0.14 = 20.71$]
17. 9.29 turns [$1.3 \div 0.14 = 9.29$]
18. 31.43 turns [$4.4 \div 0.14 = 31.43$]
19. 36.43 turns [$5.1 \div 0.14 = 36.43$]
20. 38.57 turns [$5.4 \div 0.14 = 38.57$]

Page 147

1. 3.05 cm [$\frac{1}{2} \times 6.1 = 3.05$]
2. 0.3 cm [$\frac{1}{2} \times 0.6 = 0.3$]
3. 2.2 cm [$\frac{1}{2} \times 4.4 = 2.2$]
4. 1.1 cm [$\frac{1}{2} \times 2.2 = 1.1$]
5. 1.75 cm [$\frac{1}{2} \times 3.5 = 1.75$]
6. 0.5 cm [$\frac{1}{2} \times 1.0 = 0.5$]
7. 3.5 cm [$\frac{1}{2} \times 7.0 = 3.5$]
8. 1.9 cm [$\frac{1}{2} \times 3.8 = 1.9$]
9. 1.25 cm [$\frac{1}{2} \times 2.5 = 1.25$]
10. 0.8 cm [$\frac{1}{2} \times 1.6 = 0.8$]
11. 2.85 cm [$\frac{3}{4} \times 3.8 = 2.85$]
12. 1.43 cm [$\frac{3}{4} \times 1.9 = 1.425$]
13. 1.88 cm [$\frac{3}{4} \times 2.5 = 1.875$]
14. 2.4 cm [$\frac{3}{4} \times 3.2 = 2.4$]
15. 4.73 cm [$\frac{3}{4} \times 6.3 = 4.725$]
16. 0.98 cm [$\frac{3}{4} \times 1.3 = 0.975$]
17. 3.9 cm
    2.44 cm [$\frac{5}{8} \times 3.9 = 2.4375$]
18. 2.6 cm
    1.63 cm [$\frac{5}{8} \times 2.6 = 1.625$]
19. 1.9 cm
    1.19 cm [$\frac{5}{8} \times 1.9 = 1.1875$]
20. 1.3 cm
    0.81 cm [$\frac{5}{8} \times 1.3 = 0.8125$]

Page 149

1. 18.75 [$\frac{3}{8} \times 50 = 18.75$]
   28 [$538 \div 18.75 = 28.693$]
   84 [$28 \times 3 = 84$]
2. 33.75 4 8
3. 26.25 6 12
4. 28.5 19 57
5. 28.125 10 10
6. 33.75 17 17
7. 39.75 12 24

8. 45 10 10

9. $62\frac{1}{2}$ h $[50 \times 1\frac{1}{4} = 62\frac{1}{2}]$

10. \$30 $[2\frac{1}{2} \times 12 = 30]$

Page 150

Chapter Test

1. $\frac{3}{4}$
2. $3\frac{1}{2}$
3. $\frac{4}{7}$
4. $4\frac{4}{5}$
5. $\frac{35}{8}$
6. 0.75
7. 0.714
8. $\frac{3}{32}$
9. $\frac{3}{5}$
10. $\frac{1}{5}$
11. $9\frac{1}{2}$
12. $2\frac{2}{3}$
13. 34
14. $7\frac{1}{2}$
15. $7\frac{1}{2}$
16. $\frac{1}{9}$
17. $\frac{7}{8}$ $[\frac{7}{10} \times \frac{5}{4} = \frac{7}{8}]$
18. $2\frac{1}{6}$ $[\frac{13}{3} \times \frac{1}{2} = 2\frac{1}{6}]$
19. $\frac{1}{4}$ $[\frac{7}{8} \times \frac{2}{7} = \frac{1}{4}]$
20. 14 min $[8 \times 1\frac{3}{4} = 14]$
21. 4 laps $[22 \div 5\frac{1}{2} = 4]$
22. 0.9525 cm $[7\frac{1}{2} \times 0.127 = 0.9525]$
23. 2.38 cm $[\frac{1}{2} \times 4.76 = 2.38]$
24. 23 sections $[488 \div 20.9 = 23.35]$

Page 151

Pretest

A $\frac{5}{15}, \frac{6}{15}$

B $\frac{6}{12}, \frac{4}{12}, \frac{3}{12}$

C $\frac{7}{8} > \frac{5}{8}$, or $\frac{5}{8} < \frac{7}{8}$

D $\frac{5}{8} < \frac{3}{4}$, or $\frac{3}{4} > \frac{5}{8}$

E $2\frac{8}{16} = 2\frac{1}{2}$

F $1\frac{1}{5}$

G $1\frac{3}{8}$

H $1\frac{1}{3}$

I $\frac{3}{5}$

J $\frac{5}{16}$

K $\frac{1}{12}$

L $8\frac{7}{10}$

M 1

N $13\frac{3}{10}$

O 12

P $4\frac{1}{4}$

Q 4

R $4\frac{3}{4}$

S $4\frac{9}{20}$

T $3\frac{1}{2}$

Page 152

Set A

1. $\frac{9}{12}, \frac{4}{12}$
2. $\frac{2}{6}, \frac{5}{6}$
3. $\frac{5}{8}, \frac{2}{8}$
4. $\frac{2}{12}, \frac{7}{12}$
5. $\frac{3}{6}, \frac{2}{6}$
6. $\frac{8}{10}, \frac{5}{10}$
7. $\frac{10}{15}, \frac{9}{15}$
8. $\frac{4}{24}, \frac{9}{24}$
9. $\frac{15}{20}, \frac{6}{20}$
10. $\frac{21}{24}, \frac{8}{24}$
11. $\frac{12}{15}, \frac{5}{15}$
12. $\frac{9}{24}, \frac{14}{24}$
13. $\frac{10}{16}, \frac{3}{16}$
14. $\frac{16}{24}, \frac{3}{24}$
15. $\frac{9}{12}, \frac{2}{12}$
16. $\frac{15}{18}, \frac{14}{18}$
17. $\frac{9}{24}, \frac{14}{24}$
18. $\frac{20}{24}, \frac{15}{24}$
19. $\frac{20}{30}, \frac{21}{30}$
20. $\frac{32}{40}, \frac{25}{40}$

Set B

1. $\frac{4}{6}, \frac{5}{6}, \frac{3}{6}$
2. $\frac{7}{8}, \frac{4}{8}, \frac{6}{8}$
3. $\frac{5}{10}, \frac{6}{10}, \frac{9}{10}$
4. $\frac{10}{12}, \frac{4}{12}, \frac{7}{12}$
5. $\frac{6}{10}, \frac{5}{10}, \frac{9}{10}$
6. $\frac{8}{12}, \frac{9}{12}, \frac{6}{12}$
7. $\frac{15}{24}, \frac{6}{24}, \frac{16}{24}$
8. $\frac{6}{12}, \frac{10}{12}, \frac{9}{12}$
9. $\frac{9}{12}, \frac{8}{12}, \frac{2}{12}$
10. $\frac{9}{24}, \frac{20}{24}, \frac{8}{24}$
11. $\frac{24}{30}, \frac{20}{30}, \frac{21}{30}$
12. $\frac{35}{40}, \frac{24}{40}, \frac{4}{40}$

Page 153

Set C

1. >
2. <
3. >
4. >
5. <
6. <
7. >
8. <
9. <
10. >

Set D

1. >
2. >
3. <
4. =
5. >
6. <
7. <
8. <
9. <
10. <

Set E

1. <
2. <
3. >
4. <
5. =
6. >
7. <
8. >
9. >
10. <

Page 154

Set F

1. $1\frac{2}{5}$
2. $1\frac{1}{4}$
3. 1
4. $1\frac{1}{3}$
5. $1\frac{2}{3}$
6. $1\frac{3}{5}$
7. $1\frac{1}{2}$
8. $1\frac{2}{3}$
9. $1\frac{1}{3}$
10. $1\frac{1}{8}$

Set G

1. $1\frac{1}{8}$
2. $1\frac{1}{6}$
3. $1\frac{1}{4}$
4. $1\frac{1}{9}$
5. $1\frac{3}{16}$
6. $1\frac{5}{14}$
7. $1\frac{1}{3}$
8. $1\frac{1}{3}$
9. $1\frac{1}{10}$
10. $1\frac{1}{16}$
11. $1\frac{1}{5}$
12. $1\frac{1}{12}$
13. $1\frac{1}{12}$
14. $1\frac{4}{9}$

Page 155

Set G (continued)

15. $1\frac{1}{12}$
16. $1\frac{1}{6}$
17. $1\frac{3}{10}$
18. $1\frac{5}{24}$
19. $1\frac{7}{15}$
20. $1\frac{13}{24}$
21. $1\frac{7}{20}$
22. $1\frac{1}{12}$
23. $1\frac{5}{24}$
24. $1\frac{1}{24}$
25. $1\frac{1}{18}$
26. $1\frac{5}{12}$
27. $1\frac{5}{14}$
28. $1\frac{1}{18}$
29. $1\frac{7}{40}$
30. $1\frac{7}{24}$
31. $1\frac{1}{30}$
32. $1\frac{7}{24}$
33. $1\frac{1}{10}$
34. $1\frac{9}{40}$
35. $1\frac{1}{20}$
36. $1\frac{11}{24}$
37. $1\frac{7}{12}$
38. $1\frac{1}{14}$
39. $1\frac{7}{18}$
40. $1\frac{1}{24}$
41. $1\frac{5}{18}$
42. $1\frac{11}{30}$

Set H

1. $1\frac{2}{7}$
2. $\frac{5}{6}$
3. $1\frac{1}{4}$
4. $1\frac{1}{10}$
5. $1\frac{1}{6}$
6. $1\frac{1}{12}$
7. $1\frac{3}{10}$
8. $1\frac{1}{12}$
9. $1\frac{5}{24}$
10. $1\frac{1}{8}$

11. $1\frac{1}{5}$ 15. $1\frac{1}{4}$

12. $1\frac{1}{6}$ 16. $1\frac{5}{24}$

13. $1\frac{1}{16}$ 17. $1\frac{3}{20}$

14. $1\frac{7}{12}$ 18. $1\frac{7}{30}$

Break Time: 8 children

Page 156

Set I

1. $\frac{1}{3}$ 5. $\frac{1}{2}$

2. $\frac{2}{5}$ 6. $\frac{2}{3}$

3. $\frac{3}{7}$ 7. $\frac{3}{5}$

4. $\frac{1}{4}$ 8. $\frac{1}{10}$

Set J

1. $\frac{1}{6}$ 6. $\frac{1}{6}$

2. $\frac{3}{8}$ 7. $\frac{5}{12}$

3. $\frac{1}{4}$ 8. $\frac{1}{10}$

4. $\frac{1}{2}$ 9. $\frac{7}{12}$

5. $\frac{1}{4}$ 10. $\frac{11}{24}$

Page 157

Set K

1. $\frac{1}{5}$ 18. $\frac{1}{2}$

2. $\frac{5}{7}$ 19. $\frac{1}{6}$

3. $\frac{1}{3}$ 20. $\frac{1}{4}$

4. $\frac{1}{4}$ 21. $\frac{5}{12}$

5. $\frac{1}{2}$ 22. $\frac{7}{15}$

6. $\frac{1}{3}$ 23. $\frac{1}{10}$

7. $\frac{2}{3}$ 24. $\frac{1}{6}$

8. $\frac{3}{5}$ 25. $\frac{7}{15}$

9. $\frac{1}{2}$ 26. $\frac{1}{12}$

10. $\frac{1}{3}$ 27. $\frac{1}{24}$

11. $\frac{1}{4}$ 28. $\frac{7}{24}$

12. $\frac{1}{2}$ 29. $\frac{11}{20}$

13. $\frac{1}{8}$ 30. $\frac{11}{18}$

14. $\frac{1}{8}$ 31. $\frac{17}{40}$

15. $\frac{2}{9}$ 32. $\frac{5}{14}$

16. $\frac{1}{3}$ 33. $\frac{13}{30}$

17. $\frac{3}{4}$ 34. $\frac{7}{24}$

35. $\frac{7}{12}$ 38. $\frac{3}{20}$

36. $\frac{11}{24}$ 39. $\frac{7}{24}$

37. $\frac{11}{30}$ 40. $\frac{2}{15}$

Break Time: Arrow, Star, Diamond

Page 158

Set L

1. $7\frac{3}{5}$ 6. $8\frac{5}{6}$

2. $7\frac{5}{7}$ 7. $14\frac{11}{12}$

3. $11\frac{3}{4}$ 8. $10\frac{5}{12}$

4. $11\frac{5}{8}$ 9. $7\frac{9}{10}$

5. $15\frac{5}{6}$ 10. $11\frac{17}{24}$

Set M

1. $5\frac{1}{2}$ 9. $8\frac{1}{3}$ 17. $2\frac{1}{2}$

2. $6\frac{5}{6}$ 10. $3\frac{3}{4}$ 18. $9\frac{2}{5}$

3. $9\frac{2}{5}$ 11. $10\frac{5}{8}$ 19. $10\frac{1}{6}$

4. $10\frac{2}{3}$ 12. 4 20. $4\frac{1}{4}$

5. $4\frac{3}{8}$ 13. $6\frac{3}{7}$ 21. $5\frac{5}{6}$

6. 3 14. $7\frac{1}{10}$ 22. $8\frac{2}{3}$

7. $10\frac{1}{4}$ 15. $5\frac{8}{9}$ 23. $3\frac{4}{5}$

8. $5\frac{4}{7}$ 16. $7\frac{5}{12}$ 24. $6\frac{1}{2}$

Page 159

Set N

1. $5\frac{1}{8}$ 11. $9\frac{1}{14}$

2. $10\frac{1}{6}$ 12. $13\frac{13}{30}$

3. $16\frac{3}{10}$ 13. $13\frac{5}{24}$

4. $14\frac{2}{3}$ 14. $14\frac{7}{24}$

5. $6\frac{1}{6}$ 15. $12\frac{9}{20}$

6. $12\frac{5}{12}$ 16. $14\frac{7}{40}$

7. $15\frac{1}{20}$ 17. $7\frac{11}{30}$

8. $10\frac{2}{15}$ 18. $8\frac{7}{40}$

9. $5\frac{1}{12}$ 19. $9\frac{13}{24}$

10. $14\frac{1}{10}$ 20. $5\frac{5}{12}$

Set O

1. 10 3. 15

2. $15\frac{1}{3}$ 4. $4\frac{2}{5}$

5. $11\frac{1}{2}$ 23. $15\frac{1}{12}$

6. 13 24. $15\frac{2}{15}$

7. $13\frac{1}{2}$ 25. 11

8. $10\frac{3}{5}$ 26. $6\frac{7}{12}$

9. $11\frac{2}{3}$ 27. $8\frac{13}{24}$

10. 15 28. $5\frac{3}{20}$

11. $13\frac{1}{4}$ 29. $16\frac{3}{14}$

12. $11\frac{3}{10}$ 30. $15\frac{11}{30}$

13. $8\frac{1}{8}$ 31. $8\frac{5}{24}$

14. $10\frac{1}{6}$ 32. 15

15. $12\frac{1}{8}$ 33. $8\frac{7}{30}$

16. $10\frac{2}{5}$ 34. $16\frac{1}{20}$

17. $10\frac{1}{3}$ 35. $8\frac{19}{40}$

18. $8\frac{1}{6}$ 36. $15\frac{5}{24}$

19. $18\frac{1}{4}$ 37. $9\frac{13}{40}$

20. $7\frac{1}{4}$ 38. $17\frac{7}{24}$

21. $11\frac{1}{6}$ 39. $10\frac{1}{24}$

22. $6\frac{3}{10}$ 40. $14\frac{8}{15}$

Page 161

Set P

1. $5\frac{1}{4}$ 4. $6\frac{5}{12}$

2. $2\frac{4}{7}$ 5. $5\frac{1}{5}$

3. $4\frac{1}{2}$ 6. $1\frac{1}{12}$

Set Q

1. 5 4. 3

2. 7 5. 13

3. 4 6. 7

Set R

1. $2\frac{3}{5}$ 5. $1\frac{1}{2}$

2. $2\frac{3}{4}$ 6. $1\frac{5}{7}$

3. $5\frac{1}{3}$ 7. $2\frac{3}{5}$

4. $1\frac{2}{3}$ 8. $1\frac{5}{6}$

Set S

1. $3\frac{7}{12}$ 3. $2\frac{5}{6}$

2. $1\frac{7}{10}$ 4. $1\frac{14}{15}$

5. $2\frac{5}{12}$ 7. $7\frac{19}{24}$

6. $4\frac{17}{24}$ 8. $5\frac{23}{24}$

Set T

1. $2\frac{3}{5}$ 13. $4\frac{1}{8}$
2. $2\frac{2}{3}$ 14. $3\frac{5}{7}$
3. $3\frac{1}{4}$ 15. $1\frac{5}{6}$
4. $3\frac{7}{8}$ 16. $2\frac{4}{5}$
5. $3\frac{1}{6}$ 17. $5\frac{5}{12}$
6. $6\frac{1}{24}$ 18. $3\frac{7}{10}$
7. $2\frac{2}{5}$ 19. $2\frac{7}{12}$
8. $3\frac{4}{5}$ 20. $4\frac{5}{12}$
9. $\frac{1}{3}$ 21. $1\frac{23}{24}$
10. $1\frac{5}{6}$ 22. $2\frac{13}{24}$
11. $3\frac{1}{6}$ 23. $1\frac{3}{10}$
12. $\frac{1}{2}$ 24. $3\frac{19}{24}$

Page 162

Posttest

A $\frac{8}{12}, \frac{9}{12}$

B $\frac{8}{12}, \frac{10}{12}, \frac{3}{12}$

C $\frac{2}{5} < \frac{4}{5}$,
or $\frac{4}{5} > \frac{2}{5}$

D $\frac{4}{6} = \frac{2}{3}$

E $5\frac{7}{8} > 5\frac{3}{4}$,
or $5\frac{3}{4} < 5\frac{7}{8}$

F $1\frac{2}{7}$

G $1\frac{1}{3}$

H $1\frac{7}{8}$

I $\frac{1}{3}$

J $\frac{1}{4}$

K $\frac{13}{24}$

L $9\frac{7}{8}$

M 3

N $11\frac{1}{12}$

O 12

P $4\frac{1}{6}$

Q 11

R $3\frac{1}{3}$

S $3\frac{7}{12}$

T $1\frac{2}{5}$

Page 163

1. 27 h
   $81 [27 X 3 = 81]
2. 30 h
   $90 [30 X 3 = 90]
3. 39 h
   $117 [39 X 3 = 117]
4. 36 h
   $108 [36 X 3 = 108]
5. 33 h
   $99 [33 X 3 = 99]
6. 38 h
   $114 [38 X 3 = 114]

Page 165

1. $2\frac{3}{4}$ dollars
   $[74\frac{1}{4} - 71\frac{1}{2} = 2\frac{3}{4}]$
2. $\frac{4}{\square}$, or $\frac{1}{2}$ dollar
   $[9\frac{1}{8} - 8\frac{5}{8} = \frac{4}{8}]$
3. $\frac{7}{8}$ dollar
   $[23\frac{1}{8} - 22\frac{1}{4} = \frac{7}{8}]$
4. $1\frac{1}{8}$ dollars
   $[26\frac{3}{4} - 25\frac{5}{8} = 1\frac{1}{8}]$
5. $\frac{5}{8}$ dollar
   $[5\frac{3}{8} - 4\frac{3}{4} = \frac{5}{8}]$
6. $\frac{5}{8}$ dollar
   $[10\frac{3}{8} - 9\frac{3}{4} = \frac{5}{8}]$
7. $2\frac{3}{8}$ dollars
   $[33 - 30\frac{5}{8} = 2\frac{3}{8}]$
8. $\frac{3}{8}$ dollar
   $[74\frac{1}{4} - 73\frac{7}{8} = \frac{3}{8}]$
9. $\frac{1}{8}$ dollar
   $[11\frac{7}{8} - 11\frac{3}{4} = \frac{1}{8}]$
10. $1\frac{3}{4}$ dollars
    $[74\frac{1}{4} - 72\frac{1}{2} = 1\frac{3}{4}]$
11. $\frac{7}{8}$ dollar
    $[16\frac{1}{8} - 15\frac{1}{4} = \frac{7}{8}]$
12. $\frac{3}{8}$ dollar
    $[17\frac{1}{8} - 16\frac{3}{4} = \frac{3}{8}]$
13. $\frac{7}{8}$ dollar
    $[33 - 32\frac{1}{8} = \frac{7}{8}]$
14. $1\frac{7}{8}$ dollars
    $[47\frac{7}{8} - 46 = 1\frac{7}{8}]$
15. $27\frac{7}{8}$ dollars
    $[74\frac{3}{8} - 46\frac{1}{2} = 27\frac{7}{8}]$
16. $3\frac{3}{8}$ dollars
    $[10\frac{3}{8} - 7 = 3\frac{3}{8}]$
17. $2\frac{1}{8}$ dollars
    $[3\frac{7}{8} - 1\frac{3}{4} = 2\frac{1}{8}]$
18. $6\frac{3}{4}$ dollars
    $[17\frac{1}{4} - 10\frac{1}{2} = 6\frac{3}{4}]$
19. $5\frac{6}{8}$, or $5\frac{3}{4}$ dollars
    $[19\frac{5}{8} - 13\frac{7}{8} = 5\frac{6}{8}]$
20. 12 dollars
    $[27\frac{1}{4} - 15\frac{1}{4} = 12]$
21. $4\frac{6}{8}$, or $4\frac{3}{4}$ dollars
    $[11\frac{3}{8} - 6\frac{5}{8} = 4\frac{6}{8}]$

Pages 166–167

1. 8¢
2. 21¢ [29 - 8 = 21]
3. $11\frac{3}{8}$¢
4. $67\frac{5}{8}$¢ $[79 - 11\frac{3}{8} = 67\frac{5}{8}]$
5. $18\frac{5}{8}$¢
6. $58\frac{3}{8}$¢ $[77 - 18\frac{5}{8} = 58\frac{3}{8}]$
7. $38\frac{3}{8}$¢
8. $37\frac{5}{8}$¢
9. $37\frac{4}{8}$, or $37\frac{1}{2}$¢
10. Knickknacks, Ltd.
11. Toyparts Company
12. $\frac{7}{8}$¢ $[38\frac{3}{8} - 37\frac{1}{2} = \frac{7}{8}]$

13. $36\frac{3}{8}$ ¢ [$4 + 4\frac{1}{2} + 2\frac{1}{8} + 7\frac{1}{2} + 2\frac{1}{4} + 11\frac{1}{2} + 4\frac{1}{2} = 36\frac{3}{8}$]

14. $60\frac{5}{8}$ ¢ [$99 - 38\frac{3}{8} = 60\frac{5}{8}$]

15. $61\frac{3}{8}$ ¢ [$99 - 37\frac{5}{8} = 61\frac{3}{8}$]

16. $61\frac{1}{2}$ ¢ [$99 - 37\frac{1}{2} = 61\frac{1}{2}$]

Pages 168–169

1. 20 s
2. 10.7 s
3. 9.3 s

   [20 – 10.7 = 9.3]
4. 93 s

   [10 X 9.3 = 93]
5. 930 s

   [100 X 9.3 = 930]
6. 16.2 s
7. 19.0 s
8. 18.0 s
9. 19.5 s
10. 72.7 s
11. 18.175 s

    [72.7 ÷ 4 = 18.175]
12. 4.675 s

    [18.175 – 13.5 = 4.675]

Page 170

Chapter Test

1. $\frac{3}{6}, \frac{4}{6}$
2. $\frac{9}{12}, \frac{10}{12}, \frac{6}{12}$
3. $>$
4. $=$
5. $<$
6. $1\frac{1}{2}$
7. $1\frac{3}{10}$
8. $1\frac{1}{3}$
9. $\frac{1}{4}$
10. $\frac{1}{10}$
11. $\frac{5}{12}$
12. $9\frac{7}{8}$
13. 3
14. $9\frac{5}{24}$
15. 14
16. $3\frac{1}{12}$
17. 8
18. $2\frac{1}{2}$
19. $4\frac{13}{24}$
20. $6\frac{3}{8}$
21. $16\frac{3}{20}$ h
22. $\frac{3}{4}$ dollar per share

    [$7 - 6\frac{1}{4} = \frac{3}{4}$]
23. $14\frac{3}{8}$ ¢
24. $34\frac{5}{8}$ ¢ [$49 - 14\frac{3}{8} = 34\frac{5}{8}$]
25. $56\frac{3}{5}$ s

Page 171

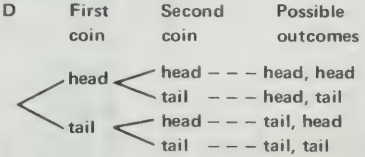
Pretest

A $\frac{1}{6}$

B $\frac{2}{6}$, or $\frac{1}{3}$

C 5

D



E $\frac{1}{4}$

F 10 000

G $\frac{2}{10\,000}$, or $\frac{1}{5000}$

H $\frac{2}{20}$, or $\frac{1}{10}$

I $\frac{18}{24}$, or $\frac{3}{4}$

J 45

Page 173

Set A

1. $\frac{1}{6}$
2. $\frac{1}{6}$
3. $\frac{1}{6}$
4. $\frac{1}{6}$
5. $\frac{1}{6}$

Set B

1. $\frac{2}{6}$, or $\frac{1}{3}$
2. $\frac{3}{6}$, or $\frac{1}{2}$
3. $\frac{1}{6}$
4. $\frac{3}{6}$, or $\frac{1}{2}$
5. $\frac{2}{6}$, or $\frac{1}{3}$
6. $\frac{4}{6}$, or $\frac{2}{3}$
7. $\frac{5}{6}$
8. $\frac{3}{6}$, or $\frac{1}{2}$
9. $\frac{1}{7}$
10. $\frac{1}{7}$
11. $\frac{2}{7}$
12. $\frac{2}{7}$
13. $\frac{3}{7}$
14. $\frac{4}{7}$
15. $\frac{1}{11}$
16. $\frac{1}{11}$
17. $\frac{2}{11}$
18. $\frac{2}{11}$
19. $\frac{3}{11}$
20. $\frac{4}{11}$

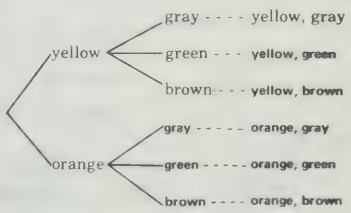
Set C

1.	1	10.	9
2.	2	11.	14
3.	4	12.	30
4.	10	13.	6
5.	15	14.	12
6.	20	15.	16
7.	4	16.	20
8.	5	17.	28
9.	7	18.	40

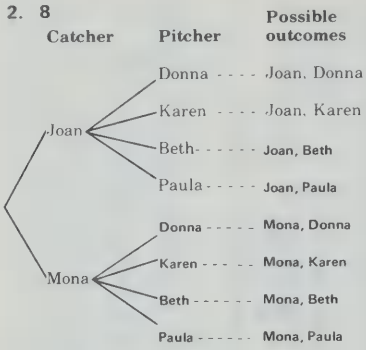
Page 174

Set D

1. 6



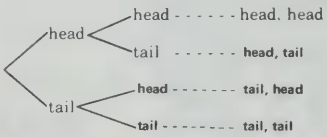
2. 8


Catcher
Pitcher
Possible outcomes
Joan
Mona
Donna - - - - Joan, Donna
Karen - - - - Joan, Karen
Beth - - - - - - Joan, Beth
Paula - - - - - Joan, Paula
Donna - - - - - Mona, Donna
Karen - - - - - - Mona, Karen
Beth - - - - - - Mona, Beth
Paula - - - - - - Mona, Paula

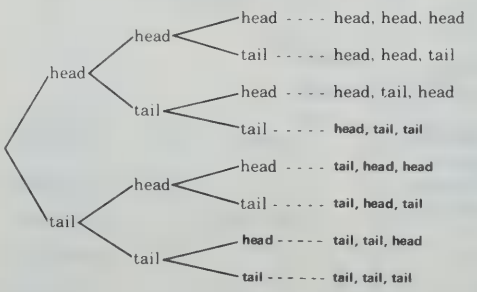
Page 175

Set D (continued)

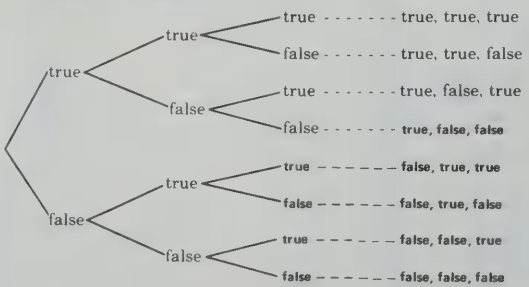
3. 4



4. 8


First coin
Second coin
Third coin
Possible outcomes
head - - - - head, head, head
tail - - - - - head, head, tail
head - - - - head, tail, head
tail - - - - - head, tail, tail
head - - - - tail, head, head
tail - - - - - tail, head, tail
head - - - - - tail, tail, head
tail - - - - - - tail, tail, tail

5. 8


First question
Second question
Third question
Possible outcomes
true - - - - - - - true, true, true
false - - - - - - - true, true, false
true - - - - - - - true, false, true
false - - - - - - - true, false, false
true - - - - - - false, true, true
false - - - - - - false, true, false
true - - - - - - false, false, true
false - - - - - - false, false, false

Set E

1. $\frac{1}{4}$
2. $\frac{1}{4}$
3. $\frac{2}{4}$, or $\frac{1}{2}$
4. $\frac{3}{4}$
5. $\frac{3}{4}$
6. $\frac{1}{8}$
7. $\frac{3}{8}$
8. $\frac{7}{8}$
9. $\frac{1}{8}$
10. $\frac{7}{8}$
11. $\frac{4}{8}$, or $\frac{1}{2}$
12. $\frac{4}{8}$, or $\frac{1}{2}$
13. $\frac{3}{8}$
14. $\frac{4}{8}$, or $\frac{1}{2}$
15. $\frac{1}{8}$

Page 176

Set F

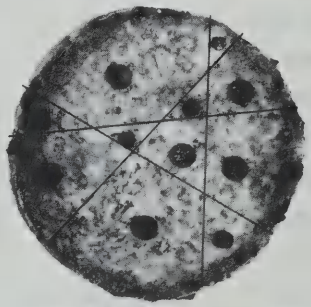
1. 100
2. 10 000
3. 100 000
4. 1 000 000
5. 4
6. 8
7. 16
8. 32
9. 64
10. 128
11. 36
12. 216
13. 24
14. 144
15. 1728

Page 177

Set G

1. $\frac{1}{100}$
2. $\frac{2}{100}$, or $\frac{1}{50}$
3. $\frac{3}{100}$
4. $\frac{10}{100}$, or $\frac{1}{10}$
5. $\frac{9}{100}$
6. $\frac{9}{100}$
7. $\frac{2}{1000}$, or $\frac{1}{500}$
8. $\frac{1}{1000}$
9. $\frac{100}{1000}$, or $\frac{1}{10}$
10. $\frac{9}{1000}$
11. $\frac{1}{10\,000}$
12. $\frac{2}{10\,000}$, or $\frac{1}{5000}$
13. $\frac{99}{10\,000}$
14. $\frac{1}{100\,000}$
15. $\frac{2}{100\,000}$, or $\frac{1}{50\,000}$
16. $\frac{99}{100\,000}$

Break Time:



Page 178

Set H

1. $\frac{2}{156}$, or $\frac{1}{78}$
2. $\frac{2}{156}$, or $\frac{1}{78}$
3. $\frac{1}{156}$
4. $\frac{3}{156}$, or $\frac{1}{52}$
5. $\frac{2}{156}$, or $\frac{1}{78}$
6. $\frac{3}{156}$, or $\frac{1}{52}$
7. $\frac{1}{156}$
8. $\frac{6}{156}$, or $\frac{1}{26}$
9. $\frac{1}{156}$
10. $\frac{3}{156}$, or $\frac{1}{52}$
11. $\frac{6}{1716}$, or $\frac{1}{286}$
12. $\frac{2}{1716}$, or $\frac{1}{858}$
13. $\frac{6}{1716}$, or $\frac{1}{286}$
14. $\frac{2}{1716}$, or $\frac{1}{858}$
15. $\frac{12}{1716}$, or $\frac{1}{143}$

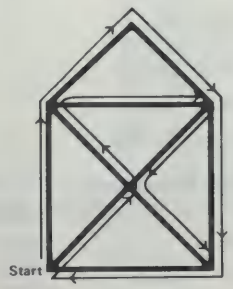
16. $\frac{1}{1716}$
17. $\frac{2}{1716}$, or $\frac{1}{858}$
18. $\frac{3}{1716}$, or $\frac{1}{572}$
19. $\frac{6}{1716}$, or $\frac{1}{286}$
20. $\frac{3}{1716}$, or $\frac{1}{572}$

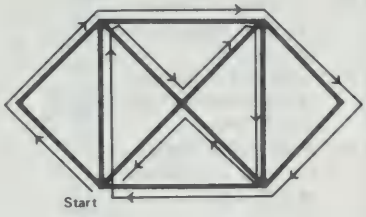
Page 179

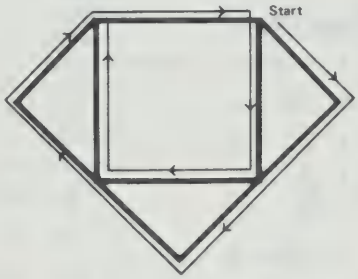
Set H (continued)

21. $\frac{6}{90}$, or $\frac{1}{15}$
22. $\frac{2}{90}$, or $\frac{1}{45}$
23. $\frac{6}{90}$, or $\frac{1}{15}$
24. $\frac{1}{90}$
25. $\frac{3}{90}$, or $\frac{1}{30}$
26. $\frac{9}{90}$, or $\frac{1}{10}$
27. $\frac{2}{90}$, or $\frac{1}{45}$
28. $\frac{6}{90}$, or $\frac{1}{15}$
29. $\frac{3}{90}$, or $\frac{1}{30}$
30. $\frac{2}{90}$, or $\frac{1}{45}$
31. $\frac{6}{720}$, or $\frac{1}{120}$
32. $\frac{6}{720}$, or $\frac{1}{120}$
33. $\frac{6}{720}$, or $\frac{1}{120}$
34. $\frac{12}{720}$, or $\frac{1}{60}$
35. $\frac{6}{720}$, or $\frac{1}{120}$
36. $\frac{9}{720}$, or $\frac{1}{80}$
37. $\frac{9}{720}$, or $\frac{1}{80}$
38. $\frac{18}{720}$, or $\frac{1}{40}$
39. $\frac{3}{720}$, or $\frac{1}{240}$
40. $\frac{6}{720}$, or $\frac{1}{120}$

Break Time: Answers may vary.







Page 181

Set I

1. $\frac{4}{16}$, or $\frac{1}{4}$
2. $\frac{5}{25}$, or $\frac{1}{5}$
3. $\frac{9}{36}$, or $\frac{1}{4}$
4. $\frac{4}{14}$, or $\frac{2}{7}$
5. $\frac{18}{28}$, or $\frac{9}{14}$
6. $\frac{10}{13}$
7. $\frac{18}{60}$, or $\frac{3}{10}$
8. $\frac{10}{42}$, or $\frac{5}{21}$
9. $\frac{8}{34}$, or $\frac{4}{17}$
10. $\frac{5}{17}$
11. $\frac{33}{90}$, or $\frac{11}{30}$
12. $\frac{16}{58}$, or $\frac{8}{29}$
13. $\frac{21}{81}$, or $\frac{7}{27}$
14. $\frac{30}{72}$, or $\frac{5}{12}$
15. $\frac{26}{68}$, or $\frac{13}{34}$
16. $\frac{25}{75}$, or $\frac{1}{3}$
17. $\frac{75}{150}$, or $\frac{1}{2}$
18. $\frac{36}{92}$, or $\frac{9}{23}$
19. $\frac{45}{125}$, or $\frac{9}{25}$
20. $\frac{200}{300}$, or $\frac{2}{5}$
21. $\frac{16}{83}$
22. $\frac{34}{102}$, or $\frac{1}{3}$

Set J

1. 7	14. 27	27. 25
2. 12	15. 84	28. 51
3. 18	16. 20	29. 50
4. 9	17. 24	30. 70
5. 15	18. 45	31. 50
6. 12	19. 18	32. 70
7. 8	20. 35	33. 72
8. 8	21. 28	34. 44
9. 14	22. 10	35. 52
10. 35	23. 63	36. 150
11. 35	24. 36	37. 102
12. 30	25. 15	38. 145
13. 40	26. 50	

Page 182

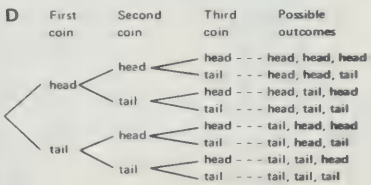
Posttest

A $\frac{1}{6}$

B $\frac{2}{6}$, or $\frac{1}{3}$

C 7

D



E $\frac{1}{8}$

F 100

G $\frac{2}{100}$, or $\frac{1}{50}$

H $\frac{2}{42}$, or $\frac{1}{21}$

I $\frac{7}{21}$, or $\frac{1}{3}$

J 14

Page 183

1. 17 576 000
2. $\frac{1}{17\,576\,000}$
3. $\frac{2}{17\,576\,000}$, or $\frac{1}{8\,788\,000}$
4. $\frac{1000}{17\,576\,000}$, or $\frac{1}{17\,576}$
5. $\frac{17\,576}{17\,576\,000}$, or $\frac{1}{1000}$
6. $\frac{260}{17\,576\,000}$, or $\frac{1}{67\,600}$
7. $\frac{1\,757\,600}{17\,576\,000}$, or $\frac{1}{10}$

8. $\frac{13\,000}{17\,576\,000}$, or $\frac{1}{1352}$

9. $\frac{700}{17\,576\,000}$, or $\frac{7}{175\,760}$

[1 X 1 X 1 X 7 X 10 X 10 = 700, 700 favorable outcomes]

10. $\frac{10}{17\,576\,000}$, or $\frac{1}{1757\,600}$

[1 X 1 X 1 X 10 X 1 X 1 = 10, 10 favorable outcomes]

Row 1 26, 10, 10; 17 576 000
Row 2 10, 10, 10; 1000
Row 3 26, 26, 1; 17 576
Row 4 1, 1; 260
Row 5 26, 26, 26, 10; 1 757 600
Row 6 26, 1, 1, 5, 10; 13 000

Page 185

	Number of sections showing each type			Total number of sections showing the number
	Single	Double	Triple	
1.	//	////	///	10
2.	/// //	////	//	13
3.	/// ///	///	/	14
4.	/// /	///	///	12
5.	/// /// /	//	//	15
6.	/// /// //	///	/	16

7. $\frac{3}{42}$, or $\frac{1}{14}$

8. $\frac{6}{42}$, or $\frac{1}{7}$

9. $\frac{12}{42}$, or $\frac{2}{7}$

10. $\frac{5}{42}$

11. $\frac{14}{42}$, or $\frac{1}{3}$

12. $\frac{2}{42}$, or $\frac{1}{21}$

13. $\frac{15}{42}$, or $\frac{5}{14}$

14. $\frac{1}{42}$

15. $\frac{3}{42}$, or $\frac{1}{14}$

16. $\frac{16}{42}$, or $\frac{8}{21}$

17. 10 sections

18. 21 chips [2 chips on single 1, 10 chips on double 1, 9 chips on triple 1]

19. 32 sections [42 - 10 = 32]

20. 32 chips [1 chip on each of 32 losing sections]

21. A net loss of 11 chips [32 - 21 = 11]

22. A net loss of 8 chips [21 chips won, 29 chips lost, 29 - 21 = 8]

23. A net loss of 7 chips [21 chips won, 28 chips lost, 28 - 21 = 7]

24. A net loss of 9 chips [21 chips won, 30 chips lost, 30 - 21 = 9]

25. A net loss of 6 chips [21 chips won, 27 chips lost, 27 - 21 = 6]

26. A net loss of 5 chips [21 chips won, 26 lost, 26 - 21 = 5]

Pages 186-187

1. 62, 91, 124, 143, 195

2. $\frac{15}{143}$

3. $\frac{14}{124}$, or $\frac{7}{62}$

4. $\frac{9}{62}$

5. $\frac{20}{91}$

6. $\frac{20}{195}$, or $\frac{4}{39}$

7. $\frac{28}{195}$

8. $\frac{23}{195}$

9. $\frac{50}{195}$, or $\frac{10}{39}$

10. $\frac{26}{195}$, or $\frac{2}{15}$

11. $\frac{19}{195}$

12. $\frac{29}{195}$

13. 72 [$\frac{28}{195}$ X 500 = $71\frac{155}{195}$]

14. 59 [$\frac{23}{195}$ X 500 = $58\frac{190}{195}$]

15. 129 [$\frac{10}{39}$ X 500 = $128\frac{8}{39}$]

16. 67 [$\frac{2}{15}$ X 500 = $66\frac{10}{15}$]

17. 49 [$\frac{19}{195}$ X 500 = $48\frac{140}{195}$]

18. 75 [$\frac{29}{195}$ X 500 = $74\frac{70}{195}$]

19. 8 L [72 ÷ 10 = 7.2]

20. 6 L [59 ÷ 10 = 5.9]

21. 13 L [129 ÷ 10 = 12.9]

22. 7 L [67 ÷ 10 = 6.7]

23. 5 L [49 ÷ 10 = 4.9]

24. 8 L [75 ÷ 10 = 7.5]

Page 188

1. $\frac{15}{9912}$, or $\frac{5}{3304}$

2. $\frac{12}{9794}$, or $\frac{6}{4897}$

3. $\frac{17}{9665}$

4. $\frac{23}{9373}$

5. $\frac{38}{9173}$

6. $\frac{216}{6801}$, or $\frac{72}{2267}$

7. $\frac{303}{4130}$

8. $\frac{288}{2626}$, or $\frac{144}{1313}$

9. $\frac{107}{468}$

10. age 99

11. ages 7-12

12. ages 75 and 76

13. age 99

14. [9480 ÷ 9665 ≐ 0.98]

15. [2626 ÷ 7699 ≐ 0.34]

16. [8762 ÷ 9982 ≐ 0.88]

17. [9480 ÷ 9743 ≐ 0.97]

18. [9173 ÷ 9241 ≐ 0.99]

19. [1311 ÷ 2626 ≐ 0.50]

20. [4130 ÷ 9806 ≐ 0.42]

Page 190

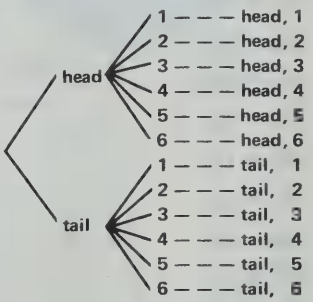
Chapter Test

1. $\frac{1}{6}$

2. $\frac{2}{6}$, or $\frac{1}{3}$

3. 4 [$\frac{1}{6}$ X 24 = 4]

4.



5. $\frac{1}{12}$

6. 100 000 [10 X 10 X 10 X 10 X 10 = 100 000]

7. $\frac{2}{100\,000}$, or $\frac{1}{50\,000}$

8. $\frac{6}{30}$, or $\frac{1}{5}$ [$\frac{3 \times 2}{6 \times 5} = \frac{6}{30}$]

9. $\frac{5}{30}$, or $\frac{1}{6}$

10. 10 [$\frac{1}{6}$ X 60 = 10]

11. 676 000 licence plates [26 X 26 X 10 X 10 X 10 = 676 000]

12. $\frac{7}{42}$, or $\frac{1}{6}$

13. 36 lime sno-cones

$[\frac{18}{150} \times 300 = 36]$

14. $\frac{278}{5592}$, or $\frac{139}{2796}$

15. 0.85 $[7699 \div 9049 \doteq 0.85]$

Page 191

Skills Tune-up

1. 608
2. 21 000
3. 1950
4. 24 576
5. 7284
6. 3404
7. 12 258
8. 18 920
9. 28 000
10. 180 856
11. 41 402
12. 60 265
13. 40 000
14. 26 070
15. 17 444
16. 43 316
17. 3008
18. 557 205
19. 16 000 000
20. 1 910 725
21. 385 088
22. 234 117
23. 612
24. 42 300
25. 5 880 984

1. 125.86
2. 312
3. 0.0782
4. 0.001 572 5
5. 0.000 21
6. 0.0492
7. 5400
8. 0.009 788 25
9. 0.0001
10. 1.5
11. 3.3
12. 0.44
13. 0.08
14. 0.15
15. 0.05
16. 1.9
17. 62.1
18. 0.014
19. 0.47
20. 14.55
21. 14.37
22. 26.87
23. 68.77
24. 2022.22

1. $\frac{2}{9}$
2. $6\frac{2}{3}$
3. 25
4. $\frac{1}{4}$
5. $\frac{7}{12}$
6. $\frac{15}{32}$
7. $8\frac{1}{6}$
8. $2\frac{11}{12}$
9. 28
10. $\frac{25}{28}$
11. $\frac{2}{3}$
12. $\frac{3}{5}$
13. 8
14. $\frac{7}{10}$
15. $\frac{1}{6}$
16. $1\frac{4}{7}$
17. $\frac{5}{19}$
18. $\frac{7}{40}$

Page 192

Calculator Exercises

1. 0.7143
2. 0.7333
3. 0.5833
4. 26.2857
5. 0.2656
6. 42.4444
7. 0.0528
8. 39.4167
9. 59.5625
10. 0.4236
11. 0.090909
12. 0.181818
13. 0.272727
14. 0.363636
15. 0.454545
16. 0.545454
17. 0.636363
18. 0.727272
19. 0.818181
20. 0.909090
21. $70\frac{3}{8}$
22. $31\frac{2}{9}$
23. $44\frac{5}{16}$
24. $36\frac{3}{7}$
25. $12\frac{47}{56}$
26. $25\frac{5}{24}$
27. $403\frac{1}{3}$
28. $178\frac{47}{64}$
29. $55\frac{11}{15}$
30. $85\frac{3}{16}$
31. $330\frac{3}{4}$
32. $540\frac{27}{28}$
33. 0.0129
34. 0.0002 $[\frac{4 \times 3 \times 2}{52 \times 51 \times 50}]$
35. 0.0153 $[\frac{13 \times 13 \times 12}{52 \times 51 \times 50}]$
36. 0.1176 $[\frac{26 \times 25 \times 24}{52 \times 51 \times 50}]$

Page 195

Pretest

A $\frac{3}{14}$

B $\frac{20}{28}$

C 8×21 15×12
not equal

D $n = 55$

E a

F $\angle T$ and $\angle R$ $\overline{BT}$ and $\overline{NR}$
$\angle B$ and $\angle N$ $\overline{TK}$ and $\overline{RD}$
$\angle K$ and $\angle D$ $\overline{BK}$ and $\overline{ND}$

G 24, 30

H $\frac{60}{4\blacksquare} = \frac{110}{n}$ $n = 88$
Proportions may vary.
A sample is given.

Page 196

Set A

1. $\frac{100}{12}$
2. $\frac{16}{18}$
3. $\frac{100}{1}$
4. $\frac{25\blacksquare}{300}$
5. $\frac{21}{60}$
6. $\frac{7}{15}$
7. $\frac{4}{7}$
8. $\frac{100\blacksquare}{5}$

Page 197

Set A (continued)

9. $\frac{340}{5}$
10. $\frac{6}{29}$
11. $\frac{35}{15}$
12. $\frac{8}{6}$
13. $\frac{2}{75}$
14. $\frac{6}{2.10}$
15. $\frac{9}{14}$
16. $\frac{32}{1}$
17. $\frac{3}{7}$

Set B

1. $\frac{8}{60}$
2. $\frac{20}{25}$
3. $\frac{28}{76}$
4. $\frac{60}{55}$
5. $\frac{20}{15}$
6. $\frac{32}{760}$
7. $\frac{32}{20}$
8. $\frac{60}{35}$
9. $\frac{100}{64}$
10. $\frac{20}{45}$
11. $\frac{12}{18}$
12. $\frac{24}{560}$
13. $\frac{75}{65}$
14. $\frac{84}{248}$

Page 198

Set C

1. equal
   30 X 12 9 X 40
2. not equal
   2 X 16 3 X 7
3. equal
   0.6 X 2.0 0.8 X 1.5
4. not equal
   3 X 5 6 X 2
5. not equal
   15 X 16 10 X 20
6. equal
   30 X 24 36 X 20
7. equal
   4 X 56 7 X 32
8. equal
   6.5 X 0.1 1.3 X 0.5
9. not equal
   3 X 27 8 X 10
10. equal
    18 X 14 63 X 4
11. not equal
    40 X 30 160 X 8
12. equal
    0.16 X 0.9 0.36 X 0.4
13. equal
    8 X 45 30 X 12
14. equal
    9 X 16 12 X 12
15. equal
    1.1 X 12 0.3 X 44
16. equal
    28 X 6 24 X 7
17. not equal
    9 X 130 15 X 81
18. not equal
    6 X 77 11 X 40
19. not equal
    2.8 X 3.5 4.5 X 2.1
20. not equal
    24 X 60 42 X 36
21. not equal
    0.3 X 4.5 0.5 X 3.0
22. equal
    14 X 33 22 X 21
23. not equal
    12 X 15 21 X 10
24. not equal
    0.08 X 0.52 0.18 X 0.24
25. equal
    18 X 42 14 X 54
26. not equal
    4.2 X 50 9 X 25.2

Page 199

Set D

1. $n = 45$
2. $d = 36$
3. $t = 35$
4. $b = 28$
5. $c = 45$
6. $a = 21$
7. $s = 13$
8. $g = 25$
9. $h = 15$
10. $k = 28$
11. $a = 20$
12. $e = 10.8$
13. $f = 2.7$
14. $r = 10$
15. $s = 18$
16. $x = 125$
17. $t = 13$
18. $y = 18$
19. $z = 36$
20. $b = 3$
21. $c = 3$
22. $x = 40$
23. $d = 6$
24. $a = 21$
25. $g = 1$
26. $k = 35$
27. $n = 15$
28. $w = 0.06$

Break Time:

1.
2.
3.
4.
5.

Page 200

Set E

1. b
2. c
3. c
4. a

Page 201

Set E (continued)

5. b
6. b
7. a
8. c

Set F

1. $\angle D$ and $\angle A$ — $\overline{DM}$ and $\overline{AJ}$
   $\angle M$ and $\angle J$ — $\overline{DR}$ and $\overline{AE}$
   $\angle R$ and $\angle E$ — $\overline{MR}$ and $\overline{JE}$
2. $\angle C$ and $\angle K$ — $\overline{CB}$ and $\overline{KQ}$
   $\angle W$ and $\angle Z$ — $\overline{CW}$ and $\overline{KZ}$
   $\angle B$ and $\angle Q$ — $\overline{BW}$ and $\overline{QZ}$
3. $\angle N$ and $\angle B$ — $\overline{LR}$ and $\overline{VY}$
   $\angle L$ and $\angle V$ — $\overline{LN}$ and $\overline{VB}$
   $\angle R$ and $\angle Y$ — $\overline{NR}$ and $\overline{BY}$
4. $\angle D$ and $\angle S$ — $\overline{GD}$ and $\overline{XS}$
   $\angle G$ and $\angle X$ — $\overline{GU}$ and $\overline{XH}$
   $\angle U$ and $\angle H$ — $\overline{DU}$ and $\overline{SH}$
5. $\angle T$ and $\angle L$ — $\overline{TB}$ and $\overline{LJ}$
   $\angle B$ and $\angle J$ — $\overline{TE}$ and $\overline{LW}$
   $\angle E$ and $\angle W$ — $\overline{EB}$ and $\overline{WJ}$

Page 202

Set G

1. 15, 12
2. 15, 9
3. 150, 90
4. 120, 90
5. 216, 180
6. 216, 72
7. 9.0, 5.4
8. 7.2, 5.4
9. 130, 50
10. 130, 100

Page 203

Set H

1. $\frac{92}{138} = \frac{80}{n}$ n is 120 m
2. $\frac{72}{36} = \frac{78}{n}$ n is 39 m
3. $\frac{50}{20} = \frac{15}{n}$ n is 6 m
4. $\frac{150}{180} = \frac{70}{n}$ n is 84 m
5. $\frac{10.5}{7.5} = \frac{6.3}{n}$ n is 4.5 m
6. $\frac{30}{12} = \frac{35}{n}$ n is 14 m
7. $\frac{140}{252} = \frac{45}{n}$ n is 81 m
8. $\frac{72}{90} = \frac{160}{n}$ n is 200 m
9. $\frac{25}{7.5} = \frac{60}{n}$ n is 18 m
10. $\frac{8.0}{5.6} = \frac{20.0}{n}$ n is 14 m

Page 204

Posttest

A $\frac{82}{5}$

B $\frac{36}{32}$

C 6 X 40 16 X 15
equal

D $x = 21$

E b

F $\angle N$ and $\angle V$ — $\overline{NA}$ and $\overline{VT}$
$\angle A$ and $\angle T$ — $\overline{NE}$ and $\overline{VB}$
$\angle E$ and $\angle B$ — $\overline{AE}$ and $\overline{TB}$

G 12, 15

H $\frac{36}{60} = \frac{72}{n}$ $n = 120$

Proportions may vary.
A sample is given.

Page 205

1. 8.7 h $\left[\frac{550}{7} = \frac{680}{n}\right]$
2. 4.2 h $\left[\frac{550}{7} = \frac{330}{n}\right]$
3. 7.5 h $\left[\frac{550}{7} = \frac{590}{n}\right]$
4. 5.3 h $\left[\frac{550}{7} = \frac{420}{n}\right]$
5. 7.6 h $\left[\frac{550}{7} = \frac{600}{n}\right]$
6. 8.9 h $\left[\frac{550}{7} = \frac{700}{n}\right]$
7. 6.0 h $\left[\frac{550}{7} = \frac{470}{n}\right]$
8. 2.9 h $\left[\frac{550}{7} = \frac{230}{n}\right]$
9. 3.8 h $\left[\frac{550}{7} = \frac{300}{n}\right]$
10. 3.6 h $\left[\frac{550}{7} = \frac{280}{n}\right]$
11. 5150 km [550 + 680 + 330 + 590 + 420 + 600 + 700 + 470 + 230 + 300 + 280 = 5150]
12. 824 L $\left[\frac{4}{25} = \frac{n}{5150}\right]$
13. \$575 $\left[\frac{230}{4} = \frac{n}{10}\right]$
14. \$805 $\left[\frac{230}{4} = \frac{n}{14}\right]$

Pages 206–207

1. 12.8 m $\left[\frac{h}{1.6} = \frac{22.4}{2.8}\right]$
2. 6.4 m $\left[\frac{h}{1.6} = \frac{28.8}{7.2}\right]$
3. 27.2 m $\left[\frac{h}{1.7} = \frac{12.8}{0.8}\right]$
4. 16.2 m $\left[\frac{h}{1.8} = \frac{57.6}{6.4}\right]$
5. 10.5 m $\left[\frac{h}{1.5} = \frac{8.4}{1.2}\right]$
6. 22.5 m $\left[\frac{h}{1.5} = \frac{55.5}{3.7}\right]$
7. 37.8 m $\left[\frac{h}{1.8} = \frac{25.2}{1.2}\right]$
8. 13.6 m $\left[\frac{h}{1.7} = \frac{10.4}{1.3}\right]$
9. 80 paces $\left[\frac{w}{50} = \frac{16}{10}\right]$
   64 m [80 x 0.8 = 64]
10. 75 paces $\left[\frac{w}{20} = \frac{15}{4}\right]$
    60 m [75 x 0.8 = 60]
11. 120 paces $\left[\frac{w}{40} = \frac{42}{14}\right]$
    96 m [120 x 0.8 = 96]
12. 60 paces $\left[\frac{w}{25} = \frac{36}{15}\right]$
    48 m [60 x 0.8 = 48]
13. 180 paces $\left[\frac{w}{54} = \frac{40}{12}\right]$
    144 m [180 x 0.8 = 144]
14. 60 paces $\left[\frac{w}{24} = \frac{25}{10}\right]$
    48 m [60 x 0.8 = 48]
15. 100 paces $\left[\frac{w}{15} = \frac{60}{9}\right]$
    80 m [100 x 0.8 = 80]
16. 70 paces $\left[\frac{w}{40} = \frac{14}{8}\right]$
    56 m [70 x 0.8 = 56]

Pages 208–209

1. 3 cm^3 $\left[\frac{350}{10} = \frac{105}{n}\right]$
2. 60 cm^3 $\left[\frac{0.5}{5} = \frac{6}{n}\right]$
3. 17 tablets $\left[\frac{84}{3} = \frac{476}{n}\right]$
4. 0.8 ml $\left[\frac{1.5}{3} = \frac{0.4}{n}\right]$
5. 25 cm^3 $\left[\frac{160}{5} = \frac{800}{n}\right]$
6. 24 tablets $\left[\frac{0.15}{1} = \frac{3.6}{n}\right]$
7. 12 tablets $\left[\frac{3.5}{5} = \frac{8.4}{n}\right]$
8. 14 ml $\left[\frac{250}{10} = \frac{350}{n}\right]$
9. 42.5 ml $\left[\frac{0.4}{5} = \frac{3.4}{n}\right]$
10. 35 cm^3 $\left[\frac{2.4}{10} = \frac{8.4}{n}\right]$
11. 30 tablets $\left[\frac{0.6}{4} = \frac{4.5}{n}\right]$
12. 25 ml $\left[\frac{1.8}{5} = \frac{9}{n}\right]$
13. \$3.75 $\left[\frac{10.15}{65} = \frac{n}{24}\right]$
14. \$6.50 $\left[\frac{9.02}{50} = \frac{n}{36}\right]$
15. \$4.10 $\left[\frac{20.50}{100} = \frac{n}{20}\right]$
16. \$6.95 $\left[\frac{13.90}{56} = \frac{n}{28}\right]$
17. \$5.84 $\left[\frac{12.50}{75} = \frac{n}{35}\right]$
18. \$2.16 $\left[\frac{18.00}{100} = \frac{n}{12}\right]$
19. \$3.44 $\left[\frac{7.15}{50} = \frac{n}{24}\right]$
20. \$6.39 $\left[\frac{21.30}{100} = \frac{n}{30}\right]$
21. \$19.13 $\left[\frac{42.50}{100} = \frac{n}{45}\right]$
22. \$8.62 $\left[\frac{7.18}{50} = \frac{n}{60}\right]$
23. \$14.53 $\left[\frac{12.35}{85} = \frac{n}{100}\right]$
24. \$3.68 $\left[\frac{14.70}{60} = \frac{n}{15}\right]$

Page 211

1. 8640 m $\left[\frac{50}{18\,000} = \frac{24}{d}\right]$
2. 7200 m $\left[\frac{50}{15\,000} = \frac{24}{d}\right]$
3. 5760 m $\left[\frac{50}{12\,000} = \frac{24}{d}\right]$
4. 4800 m $\left[\frac{50}{10\,000} = \frac{24}{d}\right]$
5. 2880 m $\left[\frac{50}{6000} = \frac{24}{d}\right]$
6. 14 400 m $\left[\frac{30}{18\,000} = \frac{24}{d}\right]$
7. 12 000 m $\left[\frac{30}{15\,000} = \frac{24}{d}\right]$
8. 9600 m $\left[\frac{30}{12\,000} = \frac{24}{d}\right]$
9. 8000 m $\left[\frac{30}{10\,000} = \frac{24}{d}\right]$
10. 4800 m $\left[\frac{30}{6000} = \frac{24}{d}\right]$
11. 18 000 m $\left[\frac{24}{18\,000} = \frac{24}{d}\right]$
12. 15 000 m $\left[\frac{24}{15\,000} = \frac{24}{d}\right]$
13. 12 000 m $\left[\frac{24}{12\,000} = \frac{24}{d}\right]$
14. 10 000 m $\left[\frac{24}{10\,000} = \frac{24}{d}\right]$
15. 6000 m $\left[\frac{24}{6000} = \frac{24}{d}\right]$

Page 212

Chapter Test

1. $\frac{11}{15}$
2. $\frac{28}{60}$
3. 15 X 75 90 X 12
   not equal
4. $t = 35$
5. c
6. $\angle D$ and $\angle H$ $\overline{DB}$ and $\overline{HW}$
   $\angle B$ and $\angle W$ $\overline{DR}$ and $\overline{HC}$
   $\angle R$ and $\angle C$ $\overline{BR}$ and $\overline{WC}$
7. 40, 70
8. $\frac{26}{52} = \frac{24}{n}$ $n = 48$
   Proportions may vary.
   A sample is given.
9. 10 h $\left[\frac{314}{4} = \frac{785}{n}\right]$
10. 3.2 m $\left[\frac{n}{1.6} = \frac{6}{3}\right]$
11. 24 cm^3 $\left[\frac{250}{10} = \frac{600}{n}\right]$
12. 11 200 m $\left[\frac{30}{14\,000} = \frac{24}{d}\right]$

Page 213

Pretest

A 0.046
B 8%
C $\frac{1}{5}$
D 75%
E 13.95
F 9
G 0.15
H 60%
I 7.5%
J 20
K 12

Page 214

Set A

1. 0.096
2. 0.53
3. 0.02
4. 3.5
5. 2.7
6. 2.15
7. 0.32
8. 0.065
9. 0.01
10. 6.05
11. 0.95
12. 7.00, or 7
13. 0.085
14. 0.09
15. 0.127
16. 0.99
17. 0.804
18. 0.13
19. 8.00, or 8
20. 0.0623
21. 0.41
22. 0.0015
23. 0.0513
24. 0.0001
25. 1.47
26. 0.04
27. 1.005
28. 0.035
29. 0.8
30. 1.5
31. 0.0125
32. 0.012
33. 0.14
34. 0.64
35. 0.025
36. 1.25
37. 0.0092
38. 5.61
39. 0.009
40. 0.35
41. 0.0725
42. 0.08
43. 3.00, or 3
44. 0.001
45. 0.919
46. 6.2
47. 0.095
48. 0.07
49. 0.0021
50. 0.0409
51. 0.0525
52. 0.003
53. 0.0625
54. 1.3
55. 0.82
56. 0.115
57. 0.081
58. 0.0052
59. 0.05
60. 0.91
61. 0.008
62. 0.132
63. 0.015
64. 0.79
65. 0.005
66. 1.1
67. 0.072
68. 0.06
69. 0.0035
70. 0.56
71. 0.0875
72. 1.75
73. 0.006
74. 0.528
75. 9.00, or 9

Page 215

Set B

1. 62%
2. 6%
3. 80%
4. 140%
5. 17%
6. 20.1%
7. 0.5%
8. 950%
9. 37%
10. 31.8%
11. 501%
12. 16.7%
13. 28%
14. 4%
15. 79%
16. 92.3%
17. 8.2%
18. 45%
19. 73.1%
20. 30%
21. 37.5%
22. 68%
23. 0.9%
24. 44%
25. 0.8%
26. 5%
27. 73%
28. 4.3%
29. 50%
30. 825%
31. 51%
32. 0.4%
33. 8%
34. 41.1%
35. 84%
36. 66.7%
37. 3%
38. 89.4%
39. 91%
40. 0.61%
41. 492%
42. 29%
43. 41%
44. 62.5%
45. 9%
46. 720%
47. 77%
48. 60%
49. 55.6%
50. 0.35%
51. 55.1%
52. 40%
53. 650%
54. 85%
55. 99%
56. 13.1%
57. 7%
58. 12.5%
59. 88%
60. 39%
61. 99.9%
62. 2%
63. 0.7%
64. 23%
65. 18%
66. 370%
67. 46.4%
68. 56%
69. 62.6%
70. 0.2%
71. 40%
72. 11%
73. 1%
74. 236%
75. 150%

Break Time: 61 people (The answer is the least common multiple of 2, 3, 4, 5, and 6; plus 1.)

Page 217

Set C

1. $\frac{7}{100}$
2. $\frac{53}{100}$
3. $\frac{1}{10}$
4. $\frac{3}{10}$
5. $\frac{7}{10}$
6. $\frac{9}{10}$
7. $\frac{67}{100}$
8. $\frac{1}{4}$
9. $\frac{13}{100}$
10. $\frac{1}{2}$
11. $\frac{71}{100}$
12. $\frac{3}{20}$
13. $\frac{1}{200}$
14. $\frac{121}{100}$, or $1\frac{21}{100}$
15. $\frac{1}{3}$
16. $\frac{89}{100}$
17. $\frac{2}{25}$
18. $\frac{7}{50}$
19. $\frac{31}{100}$
20. $\frac{3}{25}$
21. $\frac{3}{2}$, or $1\frac{1}{2}$
22. $\frac{1}{50}$
23. $\frac{3}{8}$
24. $\frac{5}{4}$, or $1\frac{1}{4}$
25. $\frac{1}{100}$
26. $\frac{3}{4}$
27. $\frac{43}{100}$
28. $\frac{103}{100}$, or $1\frac{3}{100}$
29. $\frac{19}{100}$
30. $\frac{2}{3}$
31. $\frac{3}{1}$, or 3
32. $\frac{1}{8}$
33. $\frac{27}{100}$
34. $\frac{1}{20}$
35. $\frac{11}{10}$, or $1\frac{1}{10}$
36. $\frac{1}{5}$
37. $\frac{3}{5}$
38. $\frac{4}{5}$
39. $\frac{7}{20}$
40. $\frac{93}{100}$
41. $\frac{81}{100}$
42. $\frac{59}{100}$
43. $\frac{1}{9}$
44. $\frac{5}{2}$, or $2\frac{1}{2}$

45. $\frac{1}{11}$
46. $\frac{91}{100}$
47. $\frac{5}{6}$
48. $\frac{107}{100}$, or $1\frac{7}{100}$
49. $\frac{3}{400}$
50. $\frac{9}{20}$

Set D

1. 50%
2. 20%
3. 40%
4. 60%
5. $14\frac{2}{7}\%$
6. $44\frac{4}{9}\%$
7. $88\frac{8}{9}\%$
8. $12\frac{1}{2}\%$
9. $53\frac{11}{13}\%$
10. 150%
11. 95%
12. $33\frac{1}{3}\%$
13. $62\frac{1}{2}\%$
14. $57\frac{1}{7}\%$
15. 57%
16. $16\frac{2}{3}\%$
17. 90%
18. $91\frac{2}{3}\%$
19. $11\frac{2}{3}\%$
20. $22\frac{1}{2}\%$
21. $87\frac{1}{2}\%$
22. 25%
23. 75%
24. $83\frac{1}{3}\%$
25. 125%
26. $42\frac{6}{7}\%$
27. $66\frac{2}{3}\%$
28. $6\frac{2}{3}\%$
29. 80%
30. $58\frac{1}{3}\%$
31. $56\frac{1}{4}\%$
32. $28\frac{4}{7}\%$
33. 23%
34. $106\frac{2}{3}\%$
35. $34\frac{4}{9}\%$
36. $31\frac{11}{19}\%$
37. $56\frac{2}{3}\%$
38. $51\frac{1}{9}\%$
39. $\frac{1}{2}\%$
40. $27\frac{3}{11}\%$

Break Time: 1 stack

Page 218

Set E

1. 5.4
2. 1.4
3. 1.74
4. 5.68
5. 0.078
6. 14.4
7. 1.26
8. 58.59
9. 20.13
10. 2.6
11. 7.9
12. 9
13. 6.82
14. 22.4
15. 1.53
16. 0.185
17. 31.2
18. 12.88
19. 8.52
20. 32.4
21. 9.3
22. 6.72
23. 4.05
24. 8.5
25. 2.35
26. 0.525

Page 219

Set E (continued)

27. 12
28. 0.637
29. 10.92
30. 7.3
31. 47
32. 14.7
33. 11.04
34. 0.64
35. 115.36
36. 44
37. 60.8
38. 300
39. 3.968
40. 1.89
41. 35.88
42. 115.84
43. 44.8
44. 44
45. 22.5
46. 1.84
47. 11.02
48. 10.01
49. 30.6
50. 50
51. 1.71
52. 4.6875
53. 578.4
54. 20.25
55. 0.5673
56. 13.248

Set F

1. 20
2. 82
3. 30
4. 25
5. 9
6. 2
7. 100
8. 4
9. 60
10. 50
11. 40
12. 3000
13. 188
14. 1
15. 4
16. 1000
17. 9
18. 1
19. 6
20. 200

Set G

1. 0.38
2. 0.01
3. 1.68
4. 0.51
5. 0.08
6. 0.76
7. 0.18
8. 0.65
9. 0.24
10. 0.32
11. 0.19
12. 0.09
13. 0.05
14. 3.82
15. 0.04
16. 2.44
17. 0.25
18. 0.12
19. 0.09
20. 2.41
21. 0.15
22. 0.24
23. 1.11
24. 0.03
25. 0.07

Page 220

Set H

1. 25%
2. 30%
3. 75%
4. 120%
5. 40%
6. 52%
7. 300%
8. 55%
9. 94%
10. 68%
11. 125%
12. 20%
13. 32%
14. 10%
15. 50%
16. 60%
17. 8%
18. 43%
19. 70%
20. 90%
21. 250%
22. 4%
23. 135%
24. 55%
25. 15%
26. 80%
27. 50%

Page 221

Set H (continued)

28. 25%
29. 1%
30. 200%
31. 75%
32. 20%
33. 16%
34. 80%
35. 100%
36. 70%
37. 2%
38. 10%
39. 50%
40. 200%
41. 25%
42. 50%

Set I

1. $12\frac{1}{2}\%$
2. $83\frac{1}{3}\%$
3. $41\frac{2}{3}\%$
4. $57\frac{1}{7}\%$
5. $88\frac{8}{9}\%$
6. $133\frac{1}{3}\%$
7. $71\frac{3}{7}\%$
8. $45\frac{5}{11}\%$
9. $37\frac{1}{2}\%$
10. $46\frac{2}{13}\%$
11. $116\frac{2}{3}\%$
12. $33\frac{1}{3}\%$
13. $22\frac{2}{9}\%$
14. $62\frac{1}{2}\%$
15. $85\frac{5}{7}\%$
16. $1\frac{1}{4}\%$
17. $86\frac{2}{3}\%$
18. $7\frac{1}{7}\%$
19. $13\frac{1}{3}\%$
20. $31\frac{1}{4}\%$
21. $103\frac{1}{8}\%$
22. $61\frac{7}{13}\%$
23. $43\frac{3}{4}\%$
24. $6\frac{1}{4}\%$
25. $85\frac{5}{7}\%$
26. $87\frac{1}{2}\%$
27. $83\frac{1}{3}\%$
28. $33\frac{1}{3}\%$
29. $85\frac{5}{7}\%$
30. $31\frac{9}{11}\%$
31. $5\frac{1}{2}\%$
32. $8\frac{1}{3}\%$
33. $16\frac{2}{3}\%$
34. $66\frac{2}{3}\%$
35. $112\frac{1}{2}\%$
36. $44\frac{4}{9}\%$
37. $16\frac{2}{3}\%$
38. $66\frac{2}{3}\%$
39. $55\frac{5}{9}\%$
40. $37\frac{1}{2}\%$
41. $14\frac{2}{7}\%$
42. $33\frac{1}{3}\%$

Page 222

Set J

1. 45
2. 75
3. 20
4. 2000
5. 50
6. 59
7. 50
8. 730
9. 88
10. 32
11. 116
12. 95
13. 800
14. 500
15. 140
16. 20
17. 24
18. 215
19. 600
20. 240
21. 40
22. 414
23. 330
24. 8000
25. 156
26. 140
27. 525

Page 223

Set J (continued)

28. 325
29. 18
30. 20
31. 100
32. 29
33. 3000
34. 90
35. 30
36. 800
37. 3200
38. 5000
39. 150
40. 13 000

Set K

1. 18
2. 45
3. 282
4. 15
5. 36
6. 87
7. 24
8. 174
9. 600
10. 200
11. 48
12. 152
13. 360
14. 1624
15. 24
16. 56
17. 120
18. ∎
19. 124
20. 112
21. 460
22. 216
23. 486
24. 260
25. 112
26. 270
27. 12
28. 168
29. 112
30. 24
31. 111
32. 129
33. 728
34. 1302

Page 224

Posttest

A 0.025
B 32.6%
C $\frac{7}{20}$
D 70%
E 5.44
F 7
G 0.47
H 55%
I $21\frac{1}{19}\%$
J 46
K 112

Page 225

1. $4.30 [21.50 X 0.20 = 4.30]
   $17.20 [21.50 – 4.30 = 17.20]
2. $7.80 [39.00 X 0.20 = 7.80]
   $31.20 [39.00 – 7.80 = 31.20]
3. $1.20 [7.99 X 0.15 = 1.1985]
   $6.79 [7.99 – 1.20 = 6.79]
4. $15.90 [159.00 X 0.10 = 15.90]
   $143.10
   [159.00 – 15.90 = 143.10]
5. $8.99 [44.95 X 0.20 = 8.99]
   $35.96 [44.95 – 8.99 = 35.96]
6. $6.75 [22.50 X 0.30 = 6.75]
   $15.75 [22.50 – 6.75 = 15.75]
7. $5.69 [18.98 X 0.30 = 5.694]
   $13.29 [18.98 – 5.69 = 13.29]
8. $1.75 [17.50 X 0.10 = 1.75]
   $15.75 [17.50 – 1.75 = 15.75]
9. $7.49 [29.95 X 0.25 = 7.4875]
   $22.46 [29.95 – 7.49 = 22.46]
10. $14.24 [56.95 X 0.25 = 14.2375]
    $42.71 [56.95 – 14.24 = 42.71]

Pages 226–227

1. $25.80 [215 X 0.03 X 4 = 25.80]
   $240.80 [215 + 25.80 = 240.80]
2. $15.75 [175 X 0.015 X 6 = 15.75]
   $190.75 [175 + 15.75 = 190.75]
3. $3.57 [119 X 0.01 X 3 = 3.57]
   $122.57 [119 + 3.57 = 122.57]
4. $22.58 [215 X 0.015 X 7 = 22.575]
   $237.58 [215 + 22.58 = 237.58]
5. $74.88 [312 X 0.02 X 12 = 74.88]
   $386.88 [312 + 74.88 = 386.88]
6. $6.25 [125 X 0.0125 X 4 = 6.25]
   $131.25 [125 + 6.25 = 131.25]
7. $5.25 [175 X 0.01 X 3 = 5.25]
   $180.25 [175 + 5.25 = 180.25]
8. $21.36 [89 X 0.02 X 12 = 21.36]
   $110.36 [89 + 21.36 = 110.36]
9. $25.83 [287 X 0.018 X 5 = 25.83]
   $312.83 [287 + 25.83 = 312.83]
10. $220.05
    [489 X 0.025 X 18 = 220.05]
    $709.05 [489 + 220.05 = 709.05]
11. 1.5% [1800 X 3 = 5400,
    81 ÷ 5400 = 0.015]
12. 2% [1800 X 6 = 10 800,
    216 ÷ 10 800 = 0.02]
13. 1.25% [1800 X 4 = 7200,
    90 ÷ 7200 = 0.0125]
14. 2.5% [1800 X 5 = 9000,
    225 ÷ 9000 = 0.025]
15. 2.25% [1800 X 1 = 1800,
    40.50 ÷ 1800 = 0.0225]
16. 1.5% [1800 X 7 = 12 600,
    189 ÷ 12 600 = 0.015]
17. 1.75% [1800 X 2 = 3600,
    63 ÷ 3600 = 0.0175]
18. 1% [1800 X 6 = 10 800,
    108 ÷ 10 800 = 0.01]
19. 2% [1800 X 2 = 3600,
    72 ÷ 3600 = 0.02]
20. 3% [1900 X 12 = 21 600,
    648 ÷ 21 600 = 0.03]

Page 229

1. $1213.50
   [1363.50 – 150 = 1213.50]
   $12.14
   [1213.50 X 0.01 = 12.135]
   $1225.64
   [12.14 + 1213.50 = 1225.64]
2. $1225.64
   [Balance brought forward]
   $1075.64
   [1225.64 – 150 = 1075.64]
   $10.76
   [1075.64 X 0.01 = 10.7564]
   $1086.40
   [10.76 + 1075.64 = 1086.40]
3. $1086.40
   [Balance brought forward]
   $936.40
   [1086.40 – 150 = 936.40]
   $9.37
   [936.40 X 0.01 = 9.364]
   $945.77
   [9.37 + 936.40 = 945.77]
4. $945.77
   [Balance brought forward]
   $795.77
   [945.77 – 150 = 795.77]
   $7.96
   [795.77 X 0.01 = 7.9577]
   $803.73
   [7.96 + 795.77 = 803.73]
5. $803.73
   [Balance brought forward]
   $653.73
   [803.73 – 150 = 653.73]
   $6.54
   [653.73 X 0.01 = 6.5373]
   $660.27
   [6.54 + 653.73 = 660.27]

6. $660.27
[Balance brought forward]
$510.27
[660.27 - 150 = 510.27]
$5.11
[510.27 X 0.01 = 5.1027]
$515.38
[5.11 + 510.27 = 515.38]
7. $515.38
[Balance brought forward]
$365.38
[515.38 - 150 = 365.38]
$3.66
[365.38 X 0.01 = 3.6538]
$369.04
[3.66 + 365.38 = 369.04]
8. $369.04
[Balance brought forward]
$219.04
[369.04 - 150 = 219.04]
$2.20
[219.04 X 0.01 = 2.1904]
$221.24
[2.20 + 219.04 = 221.24]
9. $221.24
[Balance brought forward]
$71.24
[221.24 - 150 = 71.24]
$0.72
[71.24 X 0.01 = 7.124]
$71.96
[0.72 + 71.24 = 71.96]
10. $71.96
[Balance brought forward]
$0.00
[71.96 - 71.96 = 0]
$0.00
[0 X 0.01 = 0]
$0.00
[0 + 0 = 0]
11. $71.96 [13.50 + 12.14 + 10.76 + 9.37 + 7.96 + 6.54 + 5.11 + 3.66 + 2.20 + 0.72 = 71.96]

Page 231

1. 0.17 ± 10%
[17 ÷ 100 = 0.17]
0.153 to 0.187
[0.17 - 0.017 = 0.153; 0.17 + 0.017 = 0.187]
2. 4 200 000 ± 5%
[42 X 100 000 = 4 200 000]
3 990 000 to 4 410 000
[4 200 000 - 210 000 = 3 990 000; 4 200 000 + 210 000 = 4 410 000]
3. 97 000 000 ± 10%
[97 X 1 000 000 = 97 000 000]
87 300 000 to 106 700 000
[97 000 000 - 9 700 000 = 87 300 000; 97 000 000 + 9 700 000 = 106 700 000]
4. 340 000 ± 2%
[34 X 10 000 = 340 000]
333 200 to 346 800
[340 000 - 6800 = 333 200; 340 000 + 6800 = 346 800]
5. 660 ± 10%
[66 X 10 = 660]
594 to 726
[660 - 66 = 594, 660 + 66 = 726]
6. 8.0 ± 2%
[80 ÷ 10 = 8.0]
7.84 to 8.16
[8.0 — 0.16 = 7.84, 8.0 + 0.16 = 8.16]
7. 2100 ± 5%
[21 X 100 = 2100]
1995 to 2205
[2100 - 105 = 1995, 2100 + 105 = 2205]
8. 58 ± 10%
[58 ÷ 1 = 58]
52.2 to 63.8
[58 - 5.8 = 52.2, 58 + 5.8 = 63.8]
9. 70 000 000 ± 5%
[70 X 1 000 000 = 70 000 000]
66 500 000 to 73 500 000
[70 000 000 - 3 500 000 = 66 500 000; 70 000 000 + 3 500 000 = 73 500 000]
10. 82 ± 2%
[82 ÷ 1 = 82]
80.36 to 83.64
[82 - 1.64 = 80.36, 82 + 1.64 = 83.64]
11. 1.4 ± 2%
[14 ÷ 10 = 1.4]
1.372 to 1.428
[1.4 - 0.028 = 1.372, 1.4 + 0.028 = 1.428]
12. 6800 ± 10%
[68 X 100 = 6800]
6120 to 7480
[6800 - 680 = 6120, 6800 + 680 = 7480]
13. 41 000 ± 10%
[41 X 1000 = 41 000]
36 900 to 45 100
[41 000 - 4100 = 36 900; 41 000 + 4100 = 45 100]
14. 0.75 ± 5%
[75 ÷ 100 = 0.75]
0.7125 to 0.7875
[0.75 - 0.0375 = 0.7125, 0.75 + 0.0375 = 0.7875]
15. 990 ± 10%
[99 X 10 = 990]
891 to 1089
[990 - 99 = 891, 990 + 99 = 1089]
16. 27 000 ± 5%
[27 X 1000 = 27 000]
25 650 to 28 350
[27 000 - 1350 = 25 650; 27 000 + 1350 = 28 350]

Page 232

Chapter Test

1. 0.02
2. 91%
3. $\frac{3}{4}$
4. $14\frac{2}{7}\%$
5. 24.36
6. 60
7. 0.05
8. 25%
9. $86\frac{2}{3}\%$
10. 80
11. 135
12. $2.38 [9.50 X 0.25 = 2.375]
13. $7.12 [9.50 - 2.38 = 7.12]
14. $22.50
[250 X 0.015 X 6 = 22.50]
15. 2% [1200 X 12 = 14 400; 288 ÷ 14 400 = 0.02]
16. $116.15 [135 - 20 = 115, 115 X 0.01 = 1.15, 1.15 + 115 = 116.15]
17. 14.67 to 17.93
[16.3 - 1.63 = 14.67, 16.3 + 1.63 = 17.93]

Page 233

Pretest

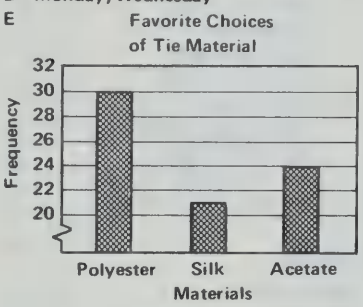
A 168.3 cm

B 168 cm

C 172 cm

D Monday, Wednesday

E

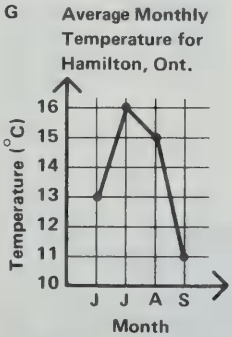


Page 234

Pretest (continued)

F 77 mm

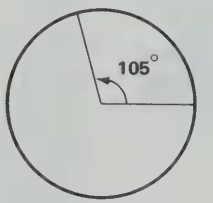
G



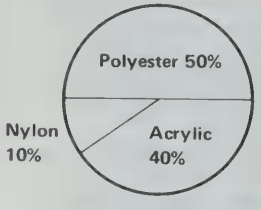
H Gravel

I 60 kg

J



K



Page 235

Set A

1. 0
2. 21.3
3. 247.3
4. 489.3
5. 8.3
6. 19.2
7. 71
8. 55.2
9. 15.7
10. 41.7
11. 83.2
12. 74.7
13. 118.3
14. 154.2
15. 247.3
16. 552.8
17. 17.1
18. 25.6
19. 137.6
20. 221.3

Page 237

Set B

1. 6 (4.7)
2. 5 (5)
3. 5 (5.3)
4. 6 (6.3)
5. 16 (19.1)
6. 89 (75.9)
7. 358 (356.1)
8. 769 (775.6)
9. 24 (27.3)
10. 36 (36)
11. 176 (175.8)
12. 985 (985)
13. 9 (7.7)
14. 16 (19.2)
15. 77 (79.7)
16. 208 (207.3)
17. 3189 (3163.7)
18. 8762 (8758.1)
19. 15 (14.6)
20. 73 (70)
21. 19 (20)
22. 62 (62.9)
23. 32 (33.1)
24. 371 (371.8)
25. 8718 (8549.8)

Set C

1. 1, 7
2. 2, 8
3. 3
4. 5
5. 16
6. 93
7. 359
8. 768
9. 12
10. 35
11. 178
12. 984
13. 9
14. 16
15. 76
16. 201
17. 3213
18. 8762, 8769
19. 12
20. 75
21. 19
22. 58, 76
23. 29
24. 375
25. 8791

Break Time:

$$
\begin{array}{r}
90809 \\
12\overline{)1089708} \\
\underline{108} \\
97 \\
\underline{96} \\
108 \\
\underline{108}
\end{array}
$$

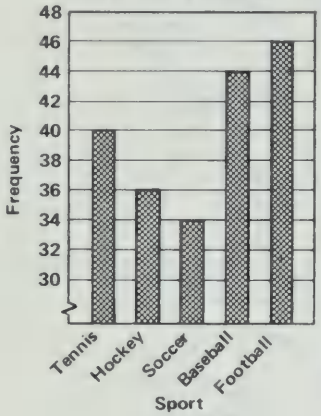
Page 239

Set D

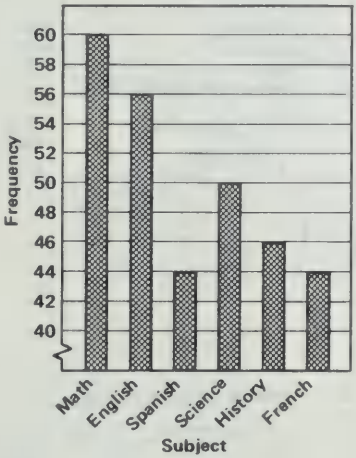
1. 150 tapes
2. 130 tapes
3. 140 tapes
4. 115 tapes
5. 155 tapes
6. Mon., Wed., Fri.
7. Mon., Tues., Wed., Fri.
8. Mon., Wed., Fri.
9. Thurs.
10. Mon., Tues., Wed., Thurs.
11. Tues., Thurs.
12. Monday
13. Tuesday
14. Friday

Set E

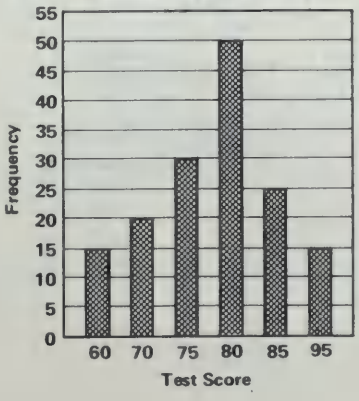
1. Choice of Favorite Sport



2. Choice of Favorite Subject



3. Mathematics Test Scores



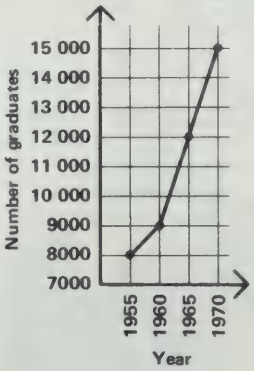
Page 241

Set F

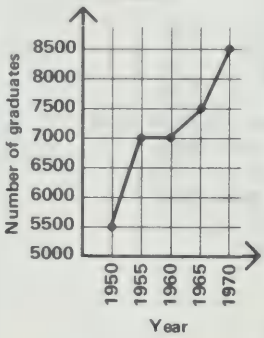
1. May, June, July, Aug., Sept.
2. Jan., Feb., Mar., Nov., Dec.
3. May, June, July, Aug., Sept.
4. Jan., Feb., Mar., Apr., Oct., Nov., Dec.
5. Jan., Dec.
6. June, July, Aug.
7. Apr., May, June, July, Aug., Sept., Oct.
8. October
9. May
10. April
11. June
12. November
13. J-550
    F-600
    M-675
    A-750
    M-850
    J-900
    J-900
    A-875
    S-800
    O-700
    N-625
    D-550

Set G

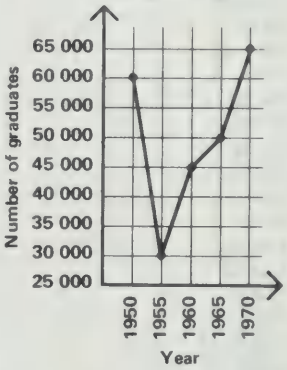
1. Graduates in Law



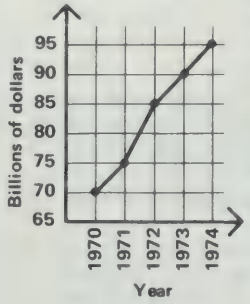
2. Graduates in Medicine



3. Graduates in Engineering



4. School Expenditures



Page 242

Set H

1. Muscle
2. Muscle
3. Bone
4. Fat
5. Muscle, Fat, Bone, Other
6. Fat, Bone, Other
7. Muscle
8. Fat, Bone, Other
9. Muscle
10. Muscle
11. Fat

Page 243

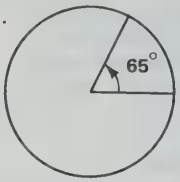
Set I

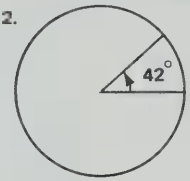
1. a. 18 kg
   b. 16.2 kg
   c. 45 kg
   d. 10.8 kg
2. a. 11 kg
   b. 9.9 kg
   c. 27.5 kg
   d. 6.6 kg
3. a. 16.4 kg
   b. 14.76 kg
   c. 41 kg
   d. 9.84 kg
4. a. 12.8 kg
   b. 11.52 kg
   c. 32 kg
   d. 7.68 kg
5. a. $168
   b. $480
   c. $432
   d. $360
6. a. $690
   b. $210
   c. $600
   d. $540
   e. $450
7. a. $621
   b. $189
   c. $540
   d. $486
   e. $405

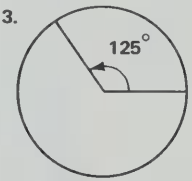
Break Time: 2

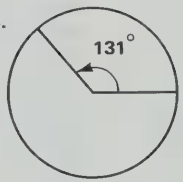
Page 245

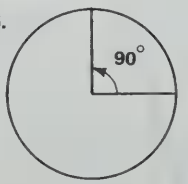
Set J

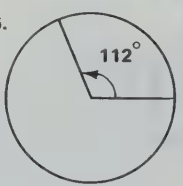
1. 

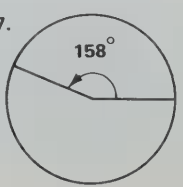
2. 

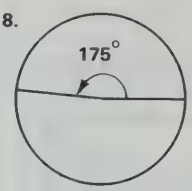
3. 

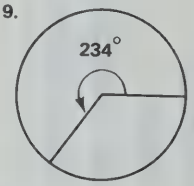
4. 

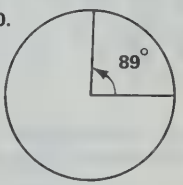
5. 

6. 

7. 

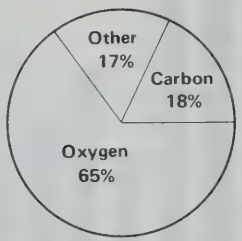
8. 

9. 

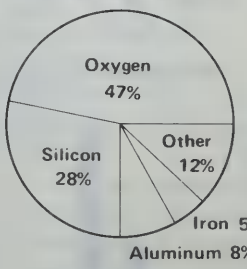
10. 

Set K

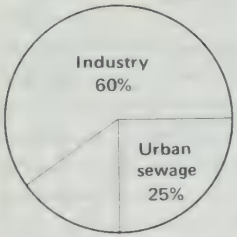
1. Elements of Human Body



2. Elements of Earth's Crust

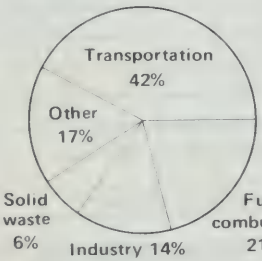


3. Sources of Water Polution



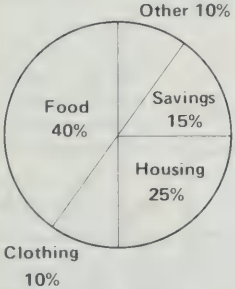
216°
90°
54°

4. Sources of Air Polution



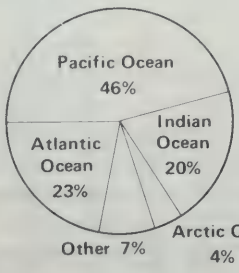
151°
76°
50°
22°
61°

5. Family Budget



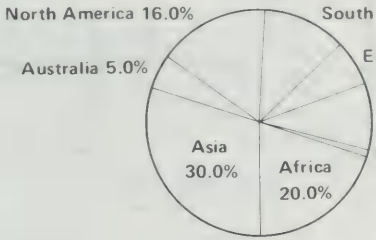
54°
90°
36°
144°
36°

6. Earth's Water



83°
166°
72°
14°
25°

7. Earth's Land



72°
108°
18°
58°
43°
23°
34°
4°

Break Time:
ONE, FOUR
FIVE, SIX, TEN
FOURTEEN, SIXTEEN
FORTY, SIXTY

Page 246

Posttest

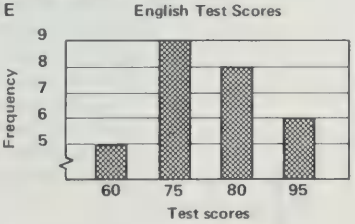
A 84.1

B 87

C 87

D Latin Club, French Club

E

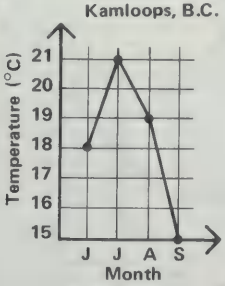


Page 247

Posttest (continued)

F 35 mm

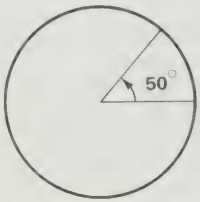
G



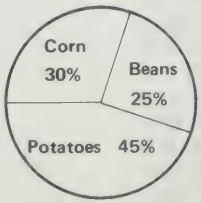
H Novel

I 875 Students

J



K Crops Planted



Central
angle
108°
90°
162°

Page 249

1. Mar. through Oct.
2. Jan., Mar. through Nov.
3. Jan., Feb., Mar., Apr., Oct., Nov., Dec.
4. Jan. through May, Oct., Nov., Dec.
5. Jan., Feb., Mar., Sept., Oct., Nov., Dec.
6. Apr. through Oct.
7. Apr. through Oct.
8. Jan., Feb., Mar., Nov., Dec.
9. May through Oct.
10. Jan., Feb., Mar., Apr., Nov., Dec.
11. May through Oct.
12. Jan., Feb., Mar., Dec.

13–15.

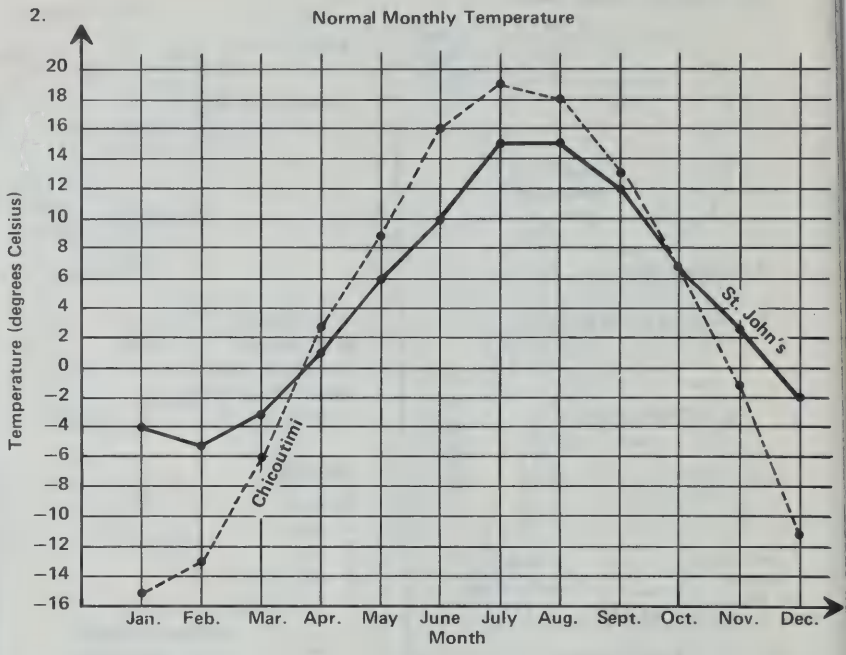
	1968	1969	1975
Jan.	$50	$55	$130
Feb.	$60	$65	$135
Mar.	$35	$45	$105
Apr.	$25	$20	$90
May	$20	$15	$50
June	$15	$20	$45
July	$10	$15	$45
Aug.	$15	$20	$40
Sept.	$15	$25	$45
Oct.	$25	$30	$65
Nov.	$45	$50	$80
Dec.	$65	$65	$120

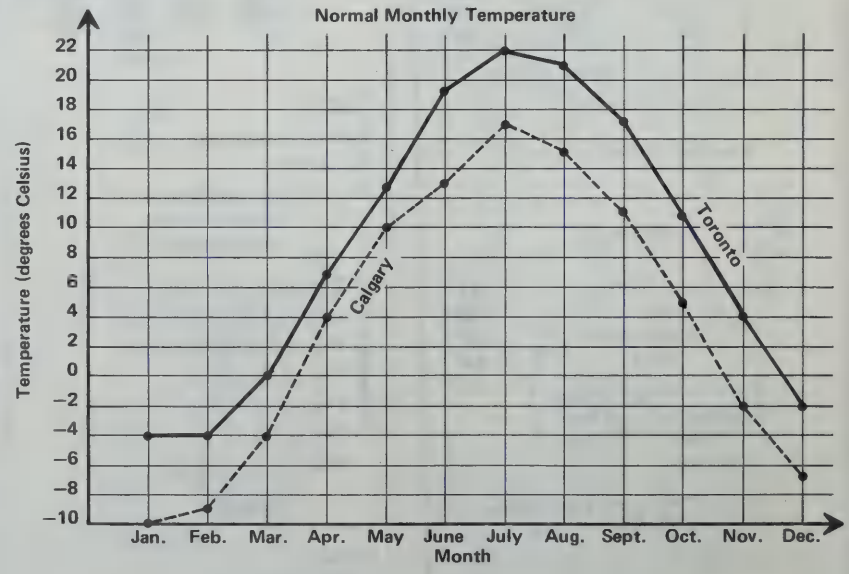
16. $31.67 [50 + 60 + 35 + 25 + 20 + 15 + 10 + 15 + 15 + 25 + 45 + 65 = 380, 380 ÷ 12 ≐ 31.67]
17. $35.42 [55 + 65 + 45 + 20 + 15 + 20 + 15 + 20 + 25 + 30 + 50 + 65 = 425, 425 ÷ 12 ≐ 35.42]
18. $79.17 [130 + 135 + 105 + 90 + 50 + 45 + 45 + 40 + 45 + 65 + 80 + 120 = 950, 950 ÷ 12 ≐ 79.17]
19. High: 1975, $130
    Low: 1968, $50
    Difference: $80
20. High: 1975, $135
    Low: 1968, $60
    Difference: $75
21. High: 1975, $90
    Low: 1969, $20
    Difference: $70
22. High: 1975, $50
    Low: 1969, $15
    Difference: $35
23. High: 1975, $40
    Low: 1968, $15
    Difference: $25
24. High: 1975, $120
    Low: 1968, 1969, $65
    Difference: $55

Pages 250–251

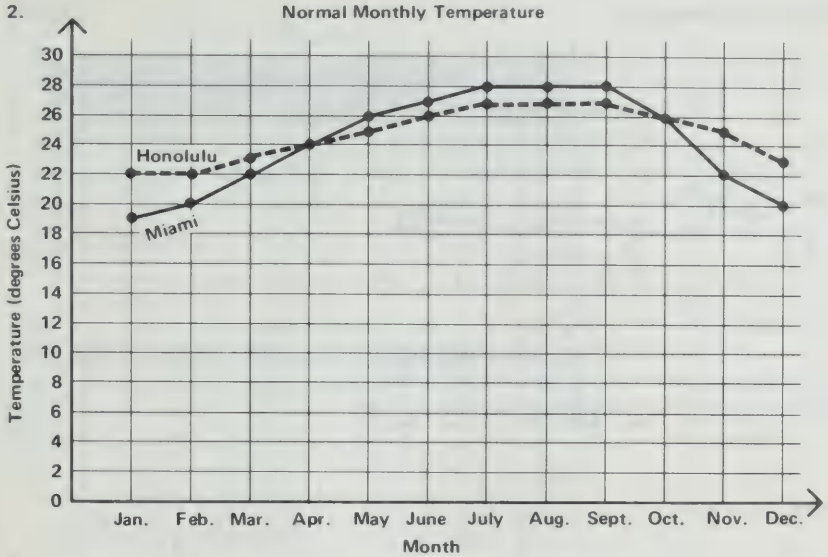
1. St. John's, 5°C
   [−4 + −5 + −3 + 1 + 6 + 10 + 15 + 15 + 12 + 7 + 3 + −2 = 55, 55 ÷ 12 ≐ 5]
   Chicoutimi, 3°C
   Toronto, 9°C
   Calgary, 4°C
   Miami, 24°C
   Honolulu, 25°C

2.





2.

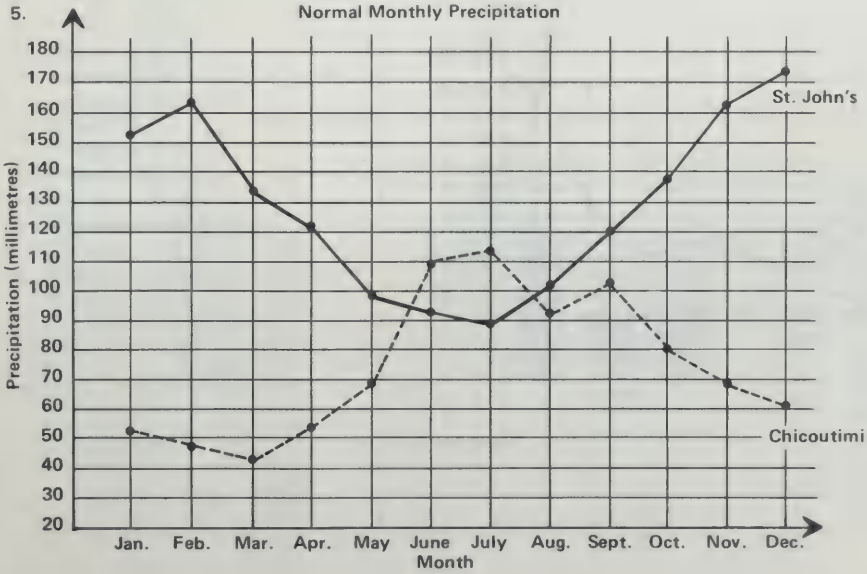


3. a. Chicoutimi b. Miami

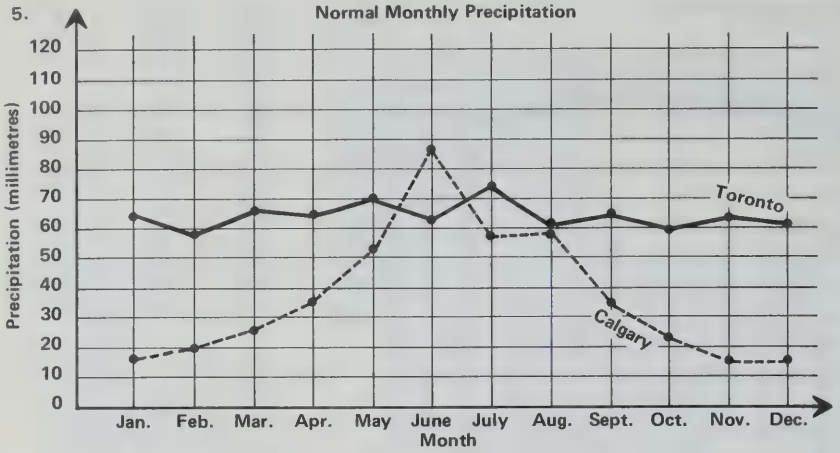
4. a. St. John's, 1550 mm
[153 + 163 + 135 + 121 + 99 + 94 + 89 + 101 + 120 + 138 + 163 + 174 = 1550]
Chicoutimi, 893 mm
Toronto, 775 mm
Calgary, 444 mm
Miami, 1519 mm
Honolulu, 586 mm

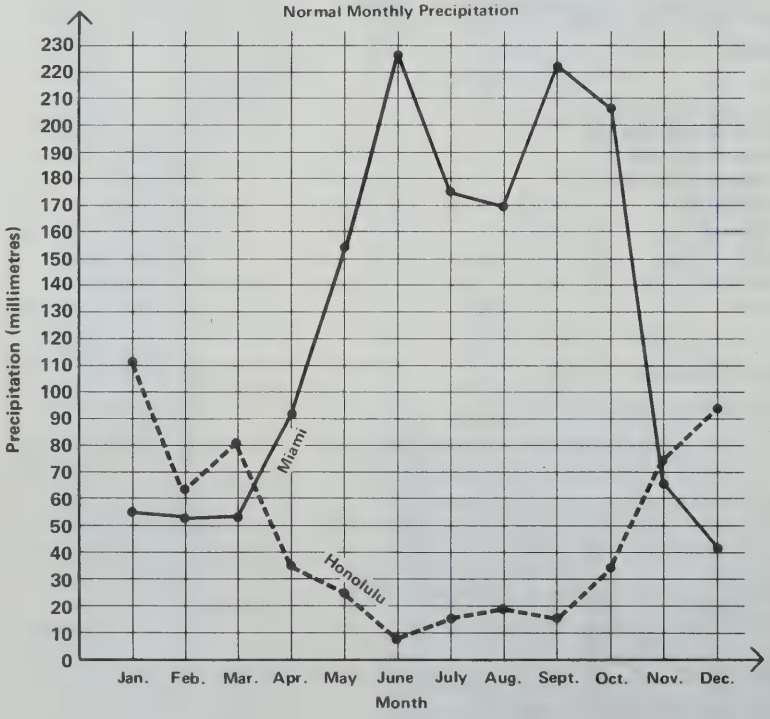
b. St. John's, 129 mm
[1550 ÷ 12 ≐ 129]
Chicoutimi, 74 mm
Toronto, 65 mm
Calgary, 37 mm
Miami, 127 mm
Honolulu, 49 mm

5.



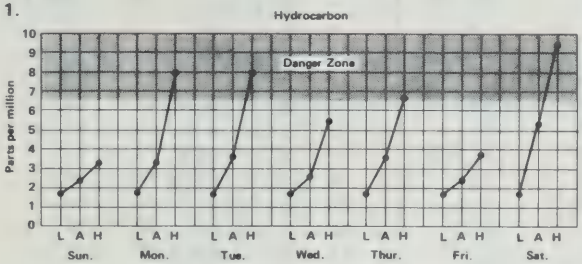
5.


Normal Monthly Precipitation
Precipitation (millimetres)
120
110
100
90
80
70
60
50
40
30
20
10
0
Toronto
Calgary
Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
Month

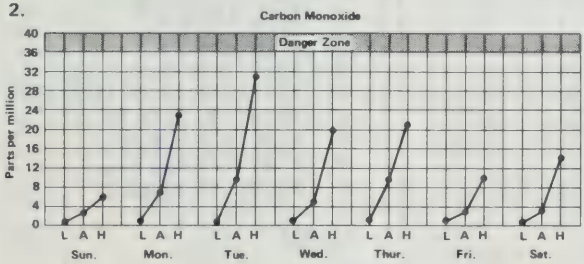

Normal Monthly Precipitation
Precipitation (millimetres)
230
220
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
Miami
Honolulu
Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
Month

Page 253

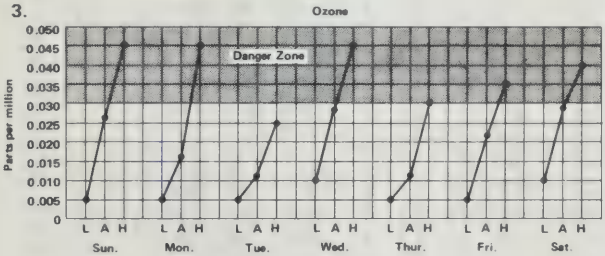
1.



2.



3.

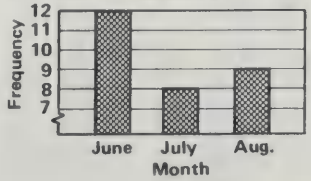


4. Monday – A
   Tuesday – A
   Thursday – A
   Saturday – A, C
5. Monday – C
   Tuesday – B, C
6. Sunday – A
   Monday – A
   Wednesday – A, C
   Thursday – A
   Friday – A
   Saturday – A, B

Page 254

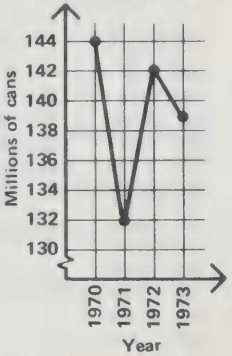
Chapter Test

1. 11 mm
2. 10 mm
3. 10 mm
4. 1950
5. Summer Birthdays



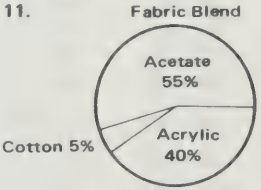
6. 1972

7. Production of Canned Asparagus



8. Tuition
9. $800
10.

11.



Central angles
198°
144°
18°

12. $93 [152 + 160 + 127 + 110 + 95 + 71 + 68 + 60 + 59 + 65 + 63 + 86 = 1116, 1116 ÷ 12 = 93]
13. 16° [2.6 + 5.2 + 9.0 + 15.8 + 20.1 + 24.9 + 27.5 + 28.3 + 22.8 + 16.9 + 9.6 + 4.4 = 187.1, 187.1 ÷ 12 ≐ 16]

Page 255

Skills tune-up

1. 97	10. 6968
2. 50	11. 156
3. 384	12. 976
4. 5800	13. 22
5. 98 220	14. 17
6. 193	15. 109
7. 160	16. 527
8. 621	17. 88
9. 241	18. 2519

19. 8861
20. 3865
21. 2248
22. 3628
23. 4838
24. 4335
25. 45 388

1. 12.9
2. 30.4
3. 1.09
4. 4.59
5. 8.961
6. 1.7
7. 1.591
8. 4.844
9. 5.692
10. 7.289
11. 10.213
12. 2.131
13. 24.17
14. 5.2
15. 0.59
16. 3.035
17. 2.181
18. 7.828
19. 0.476
20. 2.869
21. 28.41
22. 5.746
23. 8.261
24. 0.389
25. 5.399

1. $1\frac{1}{10}$
2. $9\frac{11}{12}$
3. $1\frac{1}{2}$
4. $1\frac{2}{3}$
5. $10\frac{7}{12}$
6. $1\frac{1}{8}$
7. $7\frac{1}{3}$
8. $13\frac{1}{24}$
9. $5\frac{11}{12}$
10. $\frac{7}{10}$
11. $4\frac{1}{2}$
12. $\frac{2}{3}$
13. $3\frac{7}{12}$
14. $\frac{1}{12}$
15. $3\frac{17}{24}$
16. $\frac{5}{24}$
17. $1\frac{5}{7}$
18. $2\frac{14}{15}$

Page 256

Calculator Exercises

1. $n = 1072.1$
2. $n = 150.3$
3. $n = 735.9$
4. $n = 4681.9$
5. $n = 10\ 235.0$
6. 2822.82
7. 834.632
8. 35.781
9. 1199.298
10. 9237.6
11. $21 037.78
12. $2947.50
13. $2406.25
14. $4290.00
15. $2042.50
16. $5145.00
17. $7290.00
18. $16 666.00
19. $281.78
20. $577.37
21. $564.51
22. $239.07
23. $514.30
24. $903.33
25. $14.09, $267.69
$28.87, $548.50
$28.23, $536.28
$11.95, $227.12
$25.72, $488.58
$45.17, $858.16

Page 259

Pretest

A $^{-}2$
B $2 > {}^{-}1$, or ${}^{-}1 < 2$
C $^{-}1, 0, 3, 6$
D 7
E $^{-}5$
F $^{-}4$
G $^{-}8$
H 6
I $^{-}2$
J 1
K $^{-}7$
L 6
M 3
N 27
O 12
P $^{-}20$
Q 27
R 9
S 7
T $^{-}5$
U 1

Page 261

Set A

1. $^{-}1$ 2 6
2. $^{-}6$ $^{-}2$ 1
3. $^{-}5$ $^{-}4$ 4
4. $^{-}5$ 0 3
5. 22 25
6. 30 33
7. $^{-}50$ $^{-}48$
8. $^{-}13$ $^{-}12$

Set B

1. $<$
2. $>$
3. $>$
4. $<$
5. $>$
6. $<$
7. $<$
8. $<$
9. $<$
10. $<$
11. $<$
12. $>$
13. $>$
14. $<$
15. $<$
16. $>$
17. $>$
18. $<$
19. $>$
20. $>$

Set C

1. $^{-}4, {}^{-}1, 3, 6$
2. $^{-}2, {}^{-}1, 1, 2$
3. $^{-}5, {}^{-}3, 7, 9$
4. $^{-}19, {}^{-}15, {}^{-}13, 14$
5. $^{-}30, {}^{-}10, 25, 40$
6. $^{-}7, {}^{-}4, 3, 5, 8$
7. $^{-}9, {}^{-}8, {}^{-}7, 0, 8$
8. $^{-}10, {}^{-}8, {}^{-}6, 7, 9$
9. $^{-}9, 0, 7, 8, 9$
10. $^{-}4, {}^{-}2, 0, 5, 6$
11. $^{-}16, {}^{-}14, 0, 8, 13$
12. $^{-}18, {}^{-}10, 10, 25, 35$
13. $^{-}7, {}^{-}5, {}^{-}1, 1, 5, 7$
14. $^{-}12, {}^{-}8, {}^{-}1, 8, 16$
15. $^{-}10, {}^{-}7, {}^{-}2, 6, 10$
16. $^{-}17, {}^{-}16, {}^{-}15, 15, 16, 17$
17. $^{-}28, {}^{-}21, {}^{-}9, {}^{-}5, 14, 16$
18. $^{-}9, {}^{-}8, {}^{-}7, {}^{-}6, 3, 6, 10$
19. $^{-}9, {}^{-}5, {}^{-}4, {}^{-}2, 4, 6, 9$
20. $^{-}92, {}^{-}39, {}^{-}14, 46, 52, 78$

Page 263

Set D

1. 9
2. 140
3. 4.4
4. 1108
5. 11.31
6. 20.5
7. 462
8. 10.1
9. 81
10. 13.33

Set E

1. $^{-}11$
2. $^{-}20$
3. $^{-}12.3$
4. $^{-}1011$
5. $^{-}8.2$
6. $^{-}2.41$
7. $^{-}193$
8. $^{-}8.2$
9. $^{-}9.5$
10. $^{-}900$
11. $^{-}111$
12. $^{-}17.71$
13. $^{-}5.2$
14. $^{-}91$
15. $^{-}1724$

Set F

1. $^{-}4$
2. 2
3. $^{-}12$
4. $^{-}2$
5. 15
6. $^{-}51$
7. $^{-}0.5$
8. 23
9. $^{-}2.3$
10. $^{-}0.22$
11. 129
12. 1.5
13. $^{-}3.4$
14. $^{-}22$
15. 94
16. 4.9
17. 40.9
18. $^{-}0.62$
19. $^{-}15$
20. 2.12
21. $^{-}3.8$
22. 4.6
23. $^{-}86$
24. $^{-}2.56$
25. 8.6
26. 53
27. $^{-}2.09$
28. 170

Set G

1. ⁻11
2. ⁻8
3. 7
4. 1
5. ⁻55
6. ⁻14
7. ⁻17
8. ⁻5
9. 15
10. ⁻9
11. ⁻130
12. ⁻3.2
13. ⁻1
14. 301
15. 1.5
16. ⁻17
17. ⁻1.7
18. ⁻80
19. ⁻3.5
20. 22
21. ⁻33
22. ⁻431
23. 0.01
24. ⁻14
25. ⁻80
26. ⁻0.27
27. ⁻578
28. 0.13

Page 265

Set H

1. ⁻7
2. 6
3. ⁻1
4. 35
5. ⁻48
6. 965

Set I

1. ⁻1
2. 4
3. ⁻13
4. 0.1
5. ⁻0.8
6. 14
7. ⁻213
8. ⁻4.6
9. ⁻107
10. ⁻1.09
11. ⁻8
12. ⁻16

Set J

1. 5
2. 3
3. ⁻3
4. ⁻0.3
5. 0.7
6. 56
7. 73
8. ⁻285
9. ⁻8.5
10. ⁻44
11. ⁻1.69
12. 16

Set K

1. ⁻9
2. ⁻12
3. ⁻58
4. ⁻11.3
5. ⁻4.4
6. ⁻74
7. ⁻599
8. ⁻18.1
9. ⁻1010
10. ⁻1.94
11. ⁻123
12. ⁻3.58

Set L

1. 15
2. 8
3. 25
4. 7.2
5. 28
6. 10.2
7. 668
8. 18.4
9. 850
10. 1.67
11. 77
12. 2.98

Set M

1. 29
2. 26
3. ⁻38
4. 27
5. ⁻2
6. ⁻32
7. ⁻12
8. 99
9. ⁻156
10. ⁻19
11. 4
12. 51
13. ⁻46
14. 88
15. 16
16. 26
17. ⁻14
18. 40
19. ⁻200
20. 906

Page 266

Set N

1. 54
2. 20
3. 56
4. 18
5. 18
6. 144
7. 75
8. 340
9. 640
10. 432
11. 1140
12. 1702
13. 0.63
14. 3.2
15. 5.4
16. 76
17. 12.8
18. 40.5
19. 648
20. 1200
21. 0.988
22. 0.6408
23. 3885
24. 0.682

Set O

1. 32
2. 35
3. 63
4. 24
5. 27
6. 28
7. 174
8. 245
9. 154
10. 1568
11. 720
12. 360
13. 1800
14. 4000
15. 13 736
16. 35.1
17. 4
18. 2.542
19. 17 201
20. 69.58
21. 5.135
22. 1.118
23. 2790
24. 50.4

Page 267

Set P

1. ⁻28
2. ⁻24
3. ⁻32
4. ⁻63
5. ⁻30
6. ⁻0.8
7. ⁻4410
8. ⁻0.48
9. ⁻735
10. ⁻5893
11. ⁻39
12. ⁻9.5
13. ⁻8.4
14. ⁻1.2
15. ⁻69.92
16. ⁻0.372
17. ⁻0.56
18. ⁻64 872
19. ⁻1512
20. ⁻4.75
21. ⁻2268
22. ⁻8.1
23. ⁻0.728
24. ⁻74.88
25. ⁻0.0936
26. ⁻6.21
27. ⁻11 295
28. ⁻798

Set Q

1. 16
2. ⁻14
3. 68
4. ⁻140
5. 28
6. 49
7. ⁻4
8. 76
9. ⁻50
10. ⁻114
11. 10
12. 15
13. 22
14. 37
15. ⁻22
16. ⁻50
17. 48
18. ⁻12
19. 2
20. ⁻6
21. ⁻2
22. ⁻62
23. 33
24. 3
25. ⁻5
26. 117
27. ⁻21
28. ⁻23

Break Time: 27, 11

Page 268

Set R

1. 8
2. 9
3. 6
4. 6
5. 8
6. 21
7. 5
8. 0.7
9. 80
10. 27
11. 38
12. 0.05
13. 0.4
14. 0.7
15. 6
16. 30
17. 50
18. 0.1
19. 0.9
20. 36
21. 2
22. 9
23. 4
24. 0.15

Set S

1. 7
2. 3
3. 7
4. 59
5. 0.7
6. 53
7. 0.5
8. 0.7
9. 33
10. 0.5
11. 0.09
12. 34
13. 15
14. 46
15. 310
16. 0.08
17. 9
18. 5.9
19. 14
20. 0.6
21. 1.4
22. 7
23. 2.3
24. 4

Page 269

Set T

1. ⁻2
2. ⁻6
3. ⁻3
4. ⁻7
5. ⁻6
6. ⁻6
7. ⁻0.9
8. ⁻20
9. ⁻11
10. ⁻8
11. ⁻14
12. ⁻12
13. ⁻0.04
14. ⁻1.2
15. ⁻0.8
16. ⁻0.12
17. ⁻26
18. ⁻1.3
19. ⁻0.16
20. ⁻0.6
21. ⁻23
22. ⁻1.4
23. ⁻16
24. ⁻12

25. $^{-}0.03$ 27. $^{-}35$
26. $^{-}7$ 28. $^{-}0.13$

Set U

1. $^{-}4$ 8. 4
2. $^{-}6$ 9. $^{-}10$
3. 2 10. $^{-}1$
4. $^{-}1$ 11. 7
5. $^{-}6$ 12. 58
6. 6 13. $^{-}3$
7. $^{-}2$ 14. $^{-}8$

Break Time: 15:24

Page 270

Posttest

A $^{-}3$
B $^{-}2 < 2$, or $2 > {}^{-}2$
C $^{-}8, {}^{-}3, 0, 4$
D 10
E $^{-}9$
F 2
G $^{-}2$
H 9
I $^{-}5$
J 1
K $^{-}13$
L 13
M 13
N 56
O 18
P $^{-}18$
Q 73
R 7
S 8
T $^{-}6$
U $^{-}7$

Page 271

1. Hand 2: 10 [2 + 8 = 10]
   Hand 3: 20 [6 + 14 = 20]
   Hand 4: 16 [7 + 9 = 16]
   Hand 5: $^{-}21$ [Bid not made]
   Total score: 5
2. Hand 1: 18 [10 + 8 = 18]
   Hand 3: $^{-}24$ [Bid not made]
   Hand 4: 10 [4 + 6 = 10]
   Hand 5: 21 [6 + 15 = 21]
   Total score: 50
3. Hand 1: 8 [4 + 4 = 8]
   Hand 2: 9 [1 + 8 = 9]
   Hand 3: 2 [0 + 2 = 2]
   Hand 4: $^{-}27$ [Bid not made]
   Hand 5: 6 [1 + 5 = 6]
   Total score: $^{-}2$

Page 273

1. Godfrey Point
   07:36 [07:35 + 1 min = 07:36]
   5:06 m [5.21 + $^{-}0.15$ = 5.06]
2. Claxton
   08:58 [08:50 + 8 min = 08:58]
   4.6 m [5.21 + $^{-}0.61$ = 4.6]
3. Kwinitsa River
   11:38 [10:15 + 1h 23 min = 11:38]
   2.56 m [5.36 + $^{-}2.80$ = 2.56]
4. Humpback Bay
   10:53 [11:05 – 12 min = 10:53]
   5.18 m [5.58 + $^{-}0.40$ = 5.18]
5. Casey Cove
   07:18 [07:15 + 3 min = 07:18]
   4.97 m [5.15 + $^{-}0.18$ = 4.97]
6. Trail Bay
   08:49 [08:40 + 9 min = 08:49]
   4.76 m [5.03 + $^{-}0.27$ = 4.76]
7. Stewart
   09:55 [09:50 + 5 min = 09:55]
   5.33 m [5.12 + 0.21 = 5.33]
8. Mill Bay
   11:16 [11:05 + 11 min = 11:16]
   5.09 m [5.33 + $^{-}0.24$ = 5.09]
9. Shingle Bay
   11:18 [11:05 + 13 min = 11:18]
   5.82 m [5.58 + 0.24 = 5.82]
10. Granby Bay
    09:45 [09:50 – 5 min = 09:45]
    4.91 m [5.06 + $^{-}0.15$ = 4.91]
11. Port Essington
    11:01 [10:50 + 11 min = 11:01]
    5.3 m [5.33 + $^{-}0.03$ = 5.3]
12. Salmon Cove
    11:57 [11:55 + 2 min = 11:57]
    5.43 m [5.64 + $^{-}0.21$ = 5.43]
13. Stewart
    06:25 [06:20 + 5 min = 06:25]
    5.57 m [5.36 + 0.21 = 5.57]
14. Queen Charlotte City
    08:50 [08:40 + 10 min = 08:50]
    5.3 m [5.03 + 0.27 = 5.3]
15. Shingle Bay
    12:08 [11:55 + 13 min = 12:08]
    5.88 m [5.64 + 0.24 = 5.88]
16. Godfrey Point
    20:21 [20:20 + 1 min = 20:21]
    5.79 m [5.94 + $^{-}0.15$ = 5.79]
17. Claxton
    21:28 [21:20 + 8 min = 21:28]
    5.58 m [6.19 + $^{-}0.61$ = 5.58]
18. Kwinitsa River
    23:48 [22:25 + 1h 23 min = 23:48]
    3.66 m [6.46 + $^{-}2.80$ = 3.66]
19. Humpback Bay
    22:58 [23:10 – 12 min = 22:98]
    6.28 m [6.68 + $^{-}0.40$ = 6.28]
20. Casey Cove
    19:58 [19:55 + 3 min = 19:58]
    5.89 m [6.07 + $^{-}0.18$ = 5.89]
21. Trail Bay
    20:59 [20:50 + 9 min = 20:59]
    5.86 m [6.13 + $^{-}0.27$ = 5.86]
22. Stewart
    22:00 [21:55 + 5 min = 22:00]
    6.49 m [6.28 + 0.21 = 6.49]
23. Mill Bay
    23:01 [22:50 + 11 min = 23:01]
    6.22 m [6.46 + $^{-}0.24$ = 6.22]
24. Shingle Bay
    23:23 [23:10 + 13 min = 23:23]
    6.92 m [6.68 + 0.24 = 6.92]
25. Granby Bay
    21:45 [21:50 – 5 min = 21:45]
    5.92 m [6.07 + $^{-}0.15$ = 5.92]
26. Port Essington
    23:01 [22:50 + 11 min = 23:01]
    6.22 m [6.25 + $^{-}0.03$ = 6.22]
27. Salmon Cove
    23:42 [23:40 + 2 min = 23:42]
    6.19 m [6.40 + $^{-}0.21$ = 6.19]
28. Stewart
    19:20 [19:15 + 5 min = 19:20]
    5.97 m [5.76 + 0.21 = 5.97]
29. Queen Charlotte City
    21:00 [20:50 + 10 min = 21:00]
    6.4 m [6.13 + 0.27 = 6.4]
30. Shingle Bay
    23:53 [23:40 + 13 min = 23:53]
    6.64 m [6.40 + 0.24 = 6.64]

Page 275

1. Sun
   14 [$^{-}13 - {}^{-}27 = 14$]
   398 359.1 times brighter
2. Canopus
   3.0 [$2.2 - {}^{-}0.8 = 3.0$]
   15.9 times brighter
3. Venus
   3.5 [$^{-}0.1 - {}^{-}3.5 = 3.4 \doteq 3.5$]
   25.1 times brighter
4. Vega
   1.0 [$1.0 - 0.1 = 0.9 \doteq 1.0$]
   2.5 times brighter
5. Sirius
   3.0 [$1.4 - {}^{-}1.4 = 2.8 \doteq 3.0$]
   15.9 times brighter
6. Mars
   1.0 [$^{-}0.1 - {}^{-}1 = 0.9 \doteq 1.0$]
   2.5 times brighter
7. Venus
   9.0 [$5.7 - {}^{-}3.5 = 9.2 \doteq 9.0$]
   3982.7 times brighter
8. Vega
   2.0 [$2.2 - 0.1 = 2.1 \doteq 2.0$]
   6.3 times brighter
9. Mercury
   1.0 [$^{-}0.1 - {}^{-}0.9 = 0.8 \doteq 1.0$]
   2.5 times brighter
10. Venus
    2.5 [$^{-}1 - {}^{-}3.5 = 2.5$]
    10.0 times brighter
11. Sirius
    3.5 [$2.2 - {}^{-}1.4 = 3.6 \doteq 3.5$]
    25.1 times brighter
12. Full Moon
    13.0 [$^{-}0.1 - {}^{-}13 = 12.9 \doteq 13.0$]
    158 582.5 times brighter
13. Venus
    2.5 [$^{-}0.9 - {}^{-}3.5 = 2.6 \doteq 2.5$]
    10.0 times brighter
14. Saturn
    6.0 [$5.7 - {}^{-}0.1 = 5.8 \doteq 6.0$]
    251.3 times brighter

Page 276

Chapter Test

1. $^{-}2$
2. $^{-}4 < 0$, or $0 > {}^{-}4$
3. $^{-}8, {}^{-}7, 6, 9$
4. 17
5. $^{-}10$
6. $^{-}1$
7. 2
8. 1
9. $^{-}1$
10. $^{-}4$
11. $^{-}9$
12. 11
13. 21
14. 24
15. 10
16. $^{-}28$
17. 28
18. 7
19. 4
20. $^{-}7$
21. $^{-}2$
22. 25 [12 + 13 = 25]
23. 13 [8 + 5 = 13]
24. $^{-}24$ [Bid not made]
25. 14 [25 + 13 + $^{-}24 = 14$]
26. 10:28 [10:15 + 13 min]
27. 6.06 m [6.46 + $^{-}0.40 = 6.06$]
28. Jupiter
29. 25.1 times brighter
    [$2.2 - {}^{-}1.4 = 3.6 \doteq 3.5$,
    25.1 is found in table]

Page 277

Pretest

A 26
B 0.8
C 60
D $^{-}6$
E 29
F 46.6
G $r = 4.87$
H $a = 0.51$
I $c = {}^{-}70$
J $x = 128$
K $y = 15$
L $m = 63$
M $n = 9$
N $c = 5$

Page 279

Set A

1. 19
2. 5.59
3. 52.2
4. $^{-}3$
5. 13.79
6. 6.3
7. 36
8. 51
9. 61.08
10. 4.28
11. 0.953
12. 162
13. 26.9
14. 72
15. 4.79
16. $^{-}31$
17. 4.2
18. $^{-}104$
19. 5.38
20. 113
21. 5.268
22. 91.2
23. 134.1
24. $^{-}1.74$
25. 5

Set B

1. 25.3
2. $^{-}15$
3. 1.2
4. 2.8
5. 1.2
6. $^{-}90$
7. 34.4
8. 1.8
9. 66
10. 34
11. $^{-}1.1$
12. $^{-}2.8$
13. 1.3
14. 1.2
15. $^{-}66$
16. 0.2
17. 9.7
18. 99.3
19. 32
20. 0.895
21. 5.351
22. 2.74
23. 121
24. $^{-}8.21$
25. 4.5
26. 1954.1

Set C

1. 364
2. $^{-}5040$
3. $^{-}112$
4. $^{-}180$
5. 119
6. 1.12
7. $^{-}2250$
8. $^{-}59.5$
9. 270
10. 102
11. 2.17
12. 728
13. $^{-}3.15$
14. $^{-}140$
15. 360
16. 0.595
17. 6300
18. 850
19. 1.19
20. 8.82

Set D

1. 0.06
2. 0.4
3. $^{-}2$
4. $^{-}7$
5. 0.2
6. 2
7. $^{-}1$
8. $^{-}10$
9. 2
10. $^{-}0.3$
11. 73
12. $^{-}60$

Page 280

Set E

1. 12.7
2. 2.36
3. 60.1
4. 17
5. 14
6. 48.7
7. 53.6
8. 16
9. 9.1
10. 153
11. 244
12. 14.1
13. 20.5
14. $^{-}19$
15. 277.7
16. 32

Page 281

Set E (continued)

17. $^{-}14$
18. $^{-}11.5$
19. 4.5
20. 49
21. 23
22. $^{-}19$
23. 0.51
24. 186.3
25. 7.7
26. 78
27. 104
28. 9
29. $^{-}314$
30. 2050
31. 117
32. 15

Set F

1. ⁻20
2. 44.92
3. 33
4. 5.2
5. 9.43
6. 3
7. 17.55
8. 7
9. 148
10. 59
11. 246.8
12. 2
13. ⁻570
14. ⁻242
15. 60.1
16. 0.45
17. ⁻16
18. ⁻3.9
19. 691.2
20. 1
21. 2.08
22. 16.92
23. 51
24. 2419.2
25. 10
26. ⁻21
27. 553.6
28. 5
29. 30
30. 115.234

Page 282

Set G

1. $x = 2.3$
2. $b = 25$
3. $a = 8$
4. $y = 0.38$
5. $n = ⁻30$
6. $c = 41$
7. $w = 18$
8. $d = 3.3$
9. $z = 2.52$
10. $f = 21$
11. $t = 53$
12. $x = 22.46$
13. $g = 0$
14. $u = 16$
15. $h = 1.91$
16. $v = 0.7$
17. $k = 17$
18. $w = 13.9$
19. $n = 83$
20. $a = 3.6$
21. $p = 0.31$
22. $d = ⁻74$
23. $r = 55.3$
24. $f = 96$
25. $s = 18.2$

Page 283

Set G (continued)

26. $h = 4.32$
27. $t = 0.18$
28. $n = 15$
29. $k = 0.849$
30. $v = ⁻103$
31. $p = ⁻8$
32. $w = 65$
33. $a = ⁻27$
34. $z = 5.23$
35. $b = 12.9$
36. $c = 13.6$
37. $y = ⁻32$
38. $q = 2.7$
39. $d = ⁻39$
40. $h = 0.132$
41. $m = 40$
42. $k = 5.35$
43. $p = 13.9$
44. $x = 82$
45. $g = ⁻109$
46. $z = ⁻29$
47. $a = 34.7$
48. $w = 12.6$
49. $n = 2.03$
50. $c = 15$
51. $f = 65$
52. $t = ⁻0.93$
53. $d = 30.5$
54. $z = ⁻150$
55. $m = 113.59$

Set H

1. $a = 6.7$
2. $n = 1.73$
3. $z = ⁻2$
4. $b = 23$
5. $d = 9$
6. $s = 8.4$
7. $r = 0.89$
8. $t = 44$
9. $c = 5.7$
10. $f = 1.52$
11. $x = 9.08$
12. $y = ⁻21$
13. $w = 119$
14. $n = 9.36$
15. $g = 1.031$
16. $k = 153$
17. $x = 21$
18. $a = 51.94$
19. $h = 13.07$
20. $m = 94$
21. $z = 8.15$
22. $k = ⁻21$
23. $b = 6.69$
24. $m = 1.56$
25. $w = 65.29$
26. $c = 3$
27. $d = ⁻102$
28. $f = 131.3$
29. $p = ⁻49$
30. $h = 34$
31. $q = 34.21$
32. $n = 38.9$
33. $g = 62$
34. $s = 12.28$
35. $f = 15$
36. $g = ⁻57$
37. $p = 9.121$
38. $d = 31.5$
39. $h = 92$
40. $r = 21.5$
41. $k = 8$
42. $t = 5.41$
43. $c = 14.5$
44. $s = ⁻89$
45. $m = 45.26$
46. $u = 32.3$
47. $t = 40$
48. $n = ⁻1$
49. $p = 26.48$
50. $v = 96$
51. $b = 32.86$
52. $q = ⁻100$
53. $v = ⁻41$
54. $w = 38.6$
55. $u = 13.26$
56. $a = 5$
57. $z = 95.18$

Page 284

Set I

1. $w = ⁻53$
2. $a = 70$
3. $m = ⁻9$
4. $h = 37$
5. $d = ⁻49$
6. $x = 0.8$
7. $y = 1$
8. $t = 93$
9. $c = 7.7$
10. $w = 8$
11. $g = 24$
12. $u = 9.3$
13. $y = ⁻3$
14. $g = 6$
15. $k = ⁻5$
16. $v = 84$
17. $d = 17$
18. $y = 0.9$
19. $q = 6$
20. $c = 2.1$
21. $n = ⁻40$
22. $b = 65$
23. $z = ⁻81$
24. $r = 43$
25. $t = 2.9$

Page 285

Set I (continued)

26. $p = 0.7$
27. $f = 1.1$
28. $s = 20$
29. $x = ⁻13$
30. $w = ⁻8$
31. $n = 6$
32. $z = 1.37$
33. $k = 0.09$
34. $b = ⁻1$
35. $u = 0$
36. $c = ⁻0.06$

Set J

1. $b = 6.12$
2. $n = ⁻156$
3. $a = 0.322$
4. $k = 8.19$
5. $c = 2.8$
6. $h = ⁻102$
7. $g = 72$
8. $d = ⁻375$
9. $r = 868$
10. $c = 1.175$
11. $g = ⁻44$
12. $b = ⁻112$
13. $s = 3.68$
14. $h = 4.56$
15. $a = 794.2$
16. $z = 468$
17. $t = ⁻117$
18. $k = ⁻472$
19. $u = 5.52$
20. $m = 0.371$
21. $y = 0.0464$
22. $v = ⁻612$
23. $x = 0.749$
24. $n = 196$
25. $w = ⁻156$
26. $p = ⁻1.018$
27. $v = 0.9417$
28. $q = 1.1232$
29. $w = 1212$
30. $x = 204.75$
31. $r = ⁻210$
32. $u = 0.475$
33. $s = ⁻0.594$
34. $y = 2000$
35. $f = ⁻442$
36. $t = ⁻340$
37. $d = ⁻3.843$

Page 286

Set K

1. $x = 4$
2. $n = 7$
3. $t = 9$
4. $a = ⁻1$
5. $s = 3$
6. $b = ⁻6$
7. $y = 8$
8. $c = 2$
9. $m = 13$
10. $r = 5$
11. $d = 10$
12. $k = 2$
13. $n = ⁻1$
14. $g = 0$
15. $w = 4$
16. $z = ⁻5$
17. $h = 1.5$
18. $s = 9$
19. $p = 11$
20. $n = 12$
21. $x = 2.8$
22. $t = 6$
23. $a = 17$
24. $g = 4$
25. $k = 3$

Page 287

Set K (continued)

26. $c = 9$
27. $b = 2$
28. $y = 10$
29. $m = 5$
30. $h = 7$
31. $r = 9$
32. $s = ⁻3$
33. $q = 5$
34. $d = 20$
35. $x = ⁻8$
36. $z = 40$

Set L

1. $m = 9$
2. $a = 10$
3. $x = 8$
4. $n = 12$
5. $t = 0.7$
6. $s = ⁻18$
7. $y = 40$
8. $w = 30$
9. $z = 48$
10. $n = 15$
11. $b = 38$
12. $d = 20$
13. $c = 65$
14. $q = 100$
15. $h = 32$
16. $s = ⁻17$
17. $n = 64$
18. $a = 72$
19. $c = 21$
20. $t = 18$
21. $k = 90$
22. $g = 80$
23. $d = 44$
24. $h = 3.6$
25. $x = 0.27$
26. $r = 45$
27. $b = 8.4$
28. $s = 56$

29. $v = 81$
30. $h = 7.2$
31. $u = 90$
32. $z = 26$
33. $c = 120$
34. $g = 28$
35. $v = 0.6$
36. $d = ^-30$
37. $k = ^-90$

Page 288

Set M

1. $n = 8$
2. $x = ^-9$
3. $z = 2$
4. $a = 12$
5. $t = 9$
6. $m = ^-5$
7. $b = 9$
8. $c = 7$
9. $p = 6$
10. $r = 23$
11. $s = 3$
12. $v = ^-7$
13. $z = 2$
14. $d = 2$
15. $w = ^-20$
16. $y = ^-14$
17. $u = 2$
18. $x = 5$
19. $f = ^-10$
20. $n = 4$
21. $z = 3$
22. $a = 9$
23. $q = 27$
24. $b = 1$
25. $x = 0$

Page 289

Set N

1. $c = 7$
2. $n = 2$
3. $x = ^-1$
4. $w = 3$
5. $d = 5$
6. $m = ^-4$
7. $p = 9$
8. $a = 0.6$
9. $x = ^-5$
10. $n = 8$
11. $b = 10$
12. $q = 4$
13. $k = 30$
14. $c = 7$
15. $g = 0.4$
16. $t = 5$
17. $h = 1.9$
18. $k = 3$
19. $v = 5$
20. $z = 6$
21. $u = ^-10$
22. $y = 0.5$
23. $b = 9$
24. $x = ^-6$
25. $d = 3$
26. $a = 11$
27. $s = 0$
28. $g = 0.2$
29. $c = 7$
30. $w = 0.2$
31. $x = ^-5$
32. $a = 3$
33. $k = 1$
34. $t = ^-1$
35. $g = 10$
36. $n = 4$
37. $p = 8$
38. $z = ^-2$
39. $d = 5$
40. $r = 2$

Break Time:

98 - 76 + 54 + 3 + 21 = 100

Page 290

Posttest

A 4.1
B $^-25$
C $^-102$
D 0.8
E 35
F 6.9
G $k = 21$
H $g = 22.1$
I $w = 2$
J $v = ^-180$
K $d = 5$
L $h = 75$
M $x = 12$
N $u = ^-4$

Page 291

1. 5 A [110 ÷ 22 = 5]
   550 W [110(5) = 550]
2. 5.5 A [110 ÷ 20 = 5.5]
   605 W [110(5.5) = 605]
3. 10 A [110 ÷ 11 = 10]
   1100 W [110(10) = 1100]
4. 0.4 A [110 ÷ 270 ≐ 0.4]
   44 W [110(0.4) = 44]
5. 0.5 A [110 ÷ 220 = 0.5]
   55 W [110(0.5) = 55]
6. 3.1 A [220 ÷ 70 ≐ 3.1]
   682 W [220(3.1) = 682]
7. 4 A [220 ÷ 55 = 4]
   880 W [220(4) = 880]
8. 8.8 A [220 ÷ 25 = 8.8]
   1936 W [220(8.8) = 1936]
9. 2354 W [550 + 605 + 1100 + 44 + 55 = 2354]
10. No
11. 3498 W
    [682 + 880 + 1936 = 3498]
12. Yes

Page 293

1. \$7200 $\left[\frac{18\,000(8000)}{0.8(25\,000)} = 7200\right]$

   \$800 [8000 - 7200 = 800]

2. \$3125 $\left[\frac{40\,000(5000)}{0.8(80\,000)} = 3125\right]$

   \$1875 [5000 - 1875 = 3125]

3. \$2344 \$656
4. \$2905 \$45
5. \$76 500 \$13 500
6. \$11 250 \$3750
7. \$22 645 \$2355
8. \$9583 \$1917
9. \$7916 \$4884
10. \$93 750 \$6250
11. \$8391 \$559
12. \$3675 \$625
13. \$15 541 \$2859
14. \$2841 \$159
15. \$656 \$144

Page 295

1. 8946 kg

   $\left[\frac{16.7(9000)(3)}{2.5 + 2.54} \doteq 8946\right]$

2. 5980 kg

   $\left[\frac{16.7(900)(3)}{5.0 + 2.54} \doteq 5980\right]$

3. 14 264 kg

   $\left[\frac{16.7(1400)(4.6)}{5.0 + 2.54} \doteq 14\,264\right]$

4. 8350 kg

   $\left[\frac{16.7(1200)(2.1)}{2.5 + 2.54} \doteq 8350\right]$

5. 14 613 kg

   $\left[\frac{16.7(1400)(2.4)}{1.3 + 2.54} \doteq 14\,613\right]$

6. 7045 kg

   $\left[\frac{16.7(900)(1.8)}{1.3 + 2.54} \doteq 7045\right]$

7. 9140 kg

   $\left[\frac{16.7(900)(2.7)}{1.9 + 2.54} \doteq 9140\right]$

8. 15 572 kg

   $\left[\frac{16.7(900)(4.6)}{1.9 + 2.54} \doteq 15\,572\right]$

9. 16 963 kg

   $\left[\frac{16.7(1400)(4.6)}{3.8 + 2.54} \doteq 16\,963\right]$

10. 13 644 kg

    $\left[\frac{16.7(1400)(3.7)}{3.8 + 2.54} \doteq 13\,644\right]$

11. 4.37 cm

    $\left[\frac{16.7(900)(4.6)}{10\,000} - 2.54 \doteq 4.37\right]$

12. 2.87 cm

    $\left[\frac{16.7(1200)(2.7)}{10\,000} - 2.54 \doteq 2.87\right]$

13. 11.72 cm

    $\left[\frac{16.7(1400)(6.1)}{10\,000} - 2.54 \doteq 11.72\right]$

14. 2.27 cm

$$\left[\frac{16.7(1200)(2.4)}{10\,000} - 2.54 \doteq 2.27\right]$$

15. 0.97 cm

$$\left[\frac{16.7(1400)(1.5)}{10\,000} - 2.54 \doteq 0.97\right]$$

Pages 296–297

1. 25 m/s [250 ÷ 10 = 25]
2. 26.2 m/s [340 ÷ 13 ≐ 26.2]
3. 26.4 m/s [185 ÷ 7 ≐ 26.4]
4. 216 m [18(12) = 216]
5. 73.2 m [12(6.1) = 73.2]
6. 455 m [13(35) = 455]
7. 10 s [150 ÷ 15 = 10]
8. 12.2 s [244 ÷ 20 = 12.2]
9. 25.7 s [360 ÷ 14 ≐ 25.7]
10. 22.9 m/s [240 ÷ 10.5 ≐ 22.9]
11. 15.4 m/s [200 ÷ 13 ≐ 15.4]
    55.4 km/h [3.6 X 15.4 = 55.4]
    No
12. 23.2 m/s [325 ÷ 14 ≐ 23.2]
    83.5 km/h [3.6 X 23.2 ≐ 83.5]
    No

13.	25	90	Yes
14.	29.4	105.8	Yes
15.	18	64.8	No
16.	18	64.8	Yes
17.	20	72	Yes
18.	25	90	No
19.	33.3	119.9	Yes
20.	18.3	65.9	Yes

Page 298

Chapter Test

1. 109
2. 30.4
3. $^{-}30$
4. $^{-}30$
5. 165
6. 23
7. $a = 14.6$
8. $n = {}^{-}45$
9. $y = {}^{-}23$
10. $w = 2.12$
11. $c = 12$
12. $v = 36$
13. $x = 3$
14. $d = 4$
15. 6 A [120 ÷ 20 = 6]
16. $3125 $\left[\frac{20\,000(5000)}{0.8(40\,000)} = 3125\right]$

17. 7157 kg

$$\left[\frac{16.7(900)(2.4)}{2.5 \div 2.54} \doteq 7157\right]$$

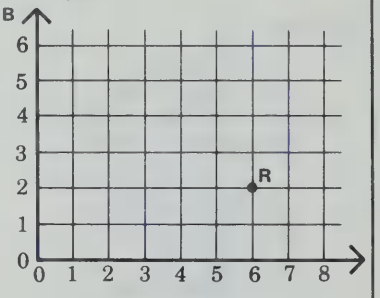
18. 20 m/s [220 ÷ 11 = 20]

Page 299

Pretest

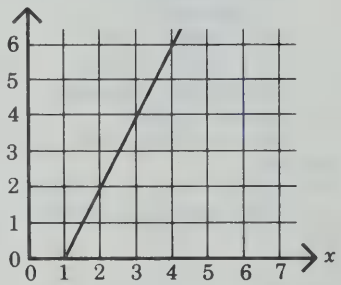
A Q(3,5)

B



C 5, 1, 3

D

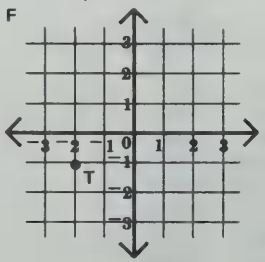


Page 300

Pretest (continued)

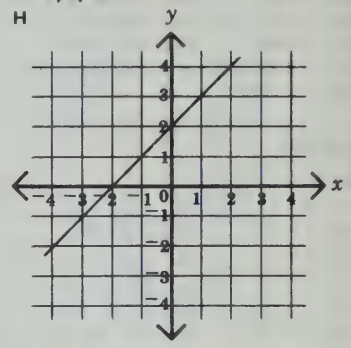
E N($^{-}2$, 1)

F



G 1, 1, $^{-}2$

H

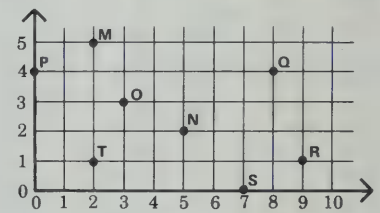


Page 301

Set A

1.	C(6, 4)	6.	H(1, 0)
2.	D(3, 4)	7.	I(8, 4)
3.	E(4, 2)	8.	J(10, 5)
4.	F(0, 3)	9.	K(8, 2)
5.	G(1, 5)	10.	L(5, 0)

Set B



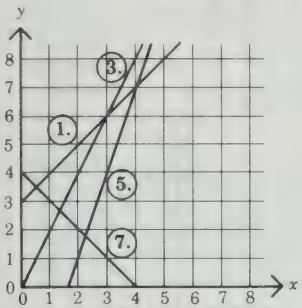
Page 303

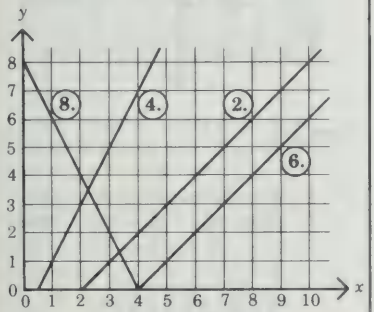
Set C

1. 1, 0, 4, 6
2. 0, 6, 4, 5
3. 6, 12, 10, 2
4. 2, 3, 0, 1
5. 1, 6, 3, 2

Set D

1. $y = x + 3$
2. $y = x - 2$
3. $y = 2x$
4. $y = 2x - 1$
5. $y = 3x - 5$
6. $y = x - 4$
7. $y = 4 - x$
8. $y = 8 - 2x$



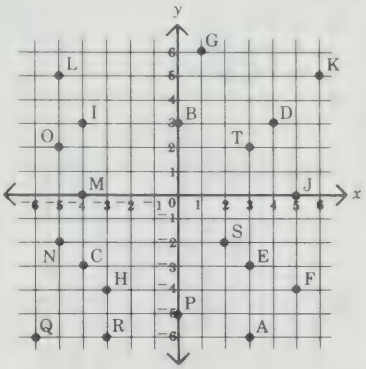


Page 305

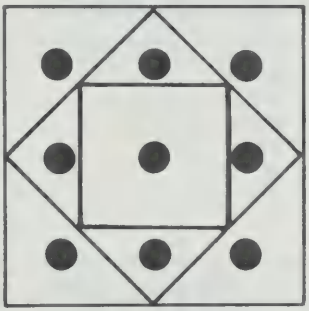
Set E

1. A(⁻3, 2)
2. B(⁻4, 4)
3. C(2, 4)
4. D(0, 2)
5. E(2, ⁻3)
6. F(⁻4, ⁻3)
7. G(3, 2)
8. H(⁻2, ⁻4)
9. I(⁻3, 0)
10. J(4, ⁻4)
11. K(2, 8)
12. L(⁻6, 6)
13. M(4, ⁻4)
14. N(⁻6, ⁻4)
15. O(6, 4)
16. P(4, ⁻8)
17. Q(⁻8, ⁻8)
18. R(2, 0)
19. S(⁻8, 2)
20. T(0, 4)

Set F



Break Time:



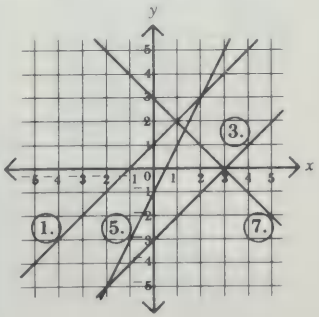
Page 307

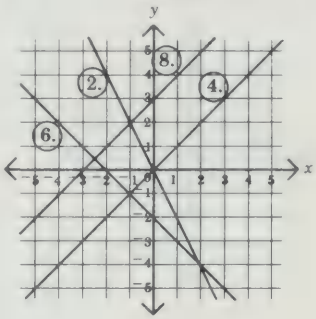
Set G

1. ⁻2, 4, ⁻2, 1
2. ⁻4, 4, 0, ⁻2
3. 0, ⁻2 or 2, 0, ⁻3
4. ⁻4, 4, ⁻3, 0
5. 1, ⁻2 or 4, ⁻3, 2

Set H

1. $y = x + 1$
2. $y = x - 3$
3. $y = 2x - 1$
4. $y = x$
5. $y = 2x - 1$
6. $y = ⁻2 - x$
7. $y = 3 - x$
8. $y = x + 3$



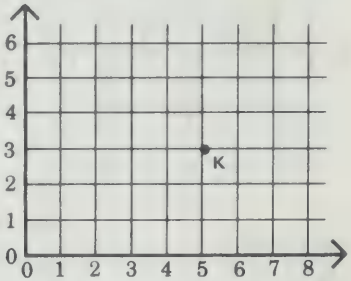


Page 308

Posttest

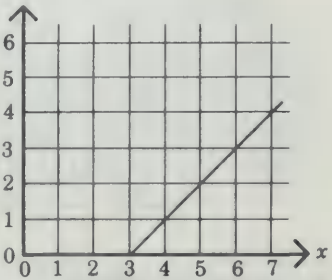
A W(6, 4)

B



C 3, 7, 3

D

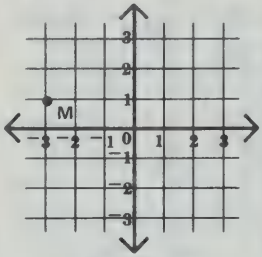


Page 309

Posttest (continued)

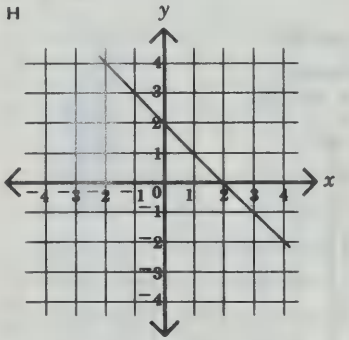
E K(2, ⁻3)

F



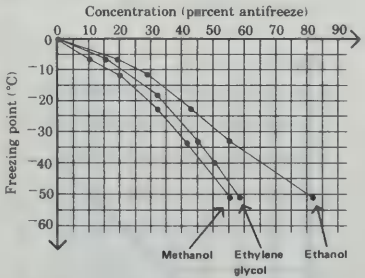
G 3, ⁻2, ⁻1

H



Pages 310–311

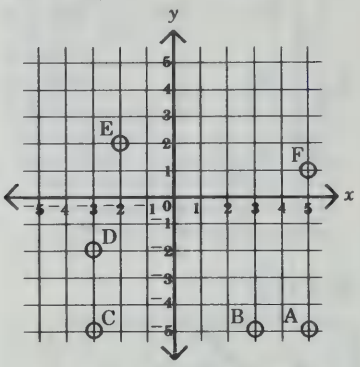
1–3.



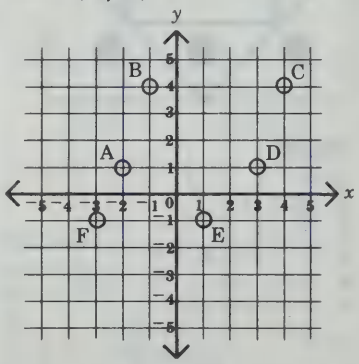
4. Methanol
5. Ethylene glycol, methanol
6. Methanol
7. Ethanol

Page 313

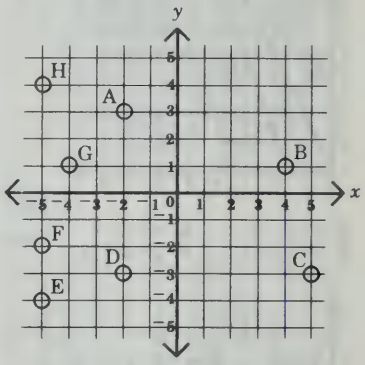
1. C (⁻3, ⁻5)
2. D (⁻3, ⁻2)
3. E (⁻2, 2)
4. F (5, 1)



5. A (⁻2, 1)
6. B (⁻1, 4)
7. C (4, 4)
8. D (3, 1)
9. E (1, ⁻1)
10. F (⁻3, ⁻1)



11. A (⁻2, 3)
12. B (4, 1)
13. C (5, ⁻3)
14. D (⁻2, ⁻3)
15. E (⁻5, ⁻4)
16. F (⁻5, ⁻2)
17. G (⁻4, 1)
18. H (⁻5, 4)

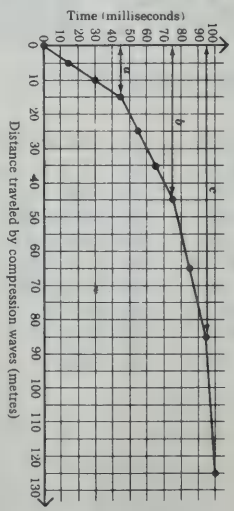


Page 315

1.

	a	*b*	*b* − *a*	*c*	*c* − *b*
Gr. 1	— — —	35 m	20 m	70 m	35 m
Gr. 2	30 m	55 m	25 m	90 m	35 m
Gr. 3	15 m	45 m	30 m	85 m	40 m

2.



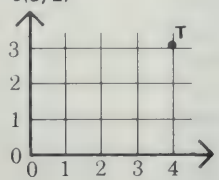
3. (15, 45) (45, 75) (85, 95)
4. See graph above.
5. See table in exercise 1.

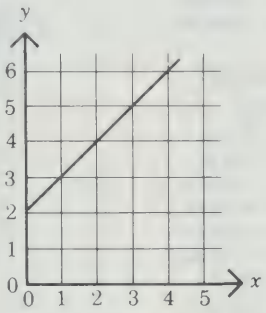
Page 317

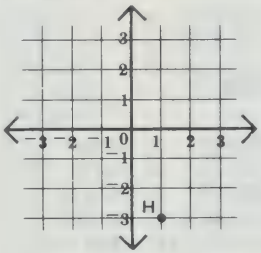
1. Brookhaven, Hammond, and Garyville
2. Brookhaven and McComb
3. TRAIN 2:
   Jackson, Lv. 13:45
   Brookhaven, Arr. 14:45, Lv. 15:00
   Hammond, Lv. 16:45
   Garyville, Lv. 17:15
   TRAIN A:
   New Orleans, Lv. 12:30
   Hammond, Lv. 14:15
   Magnolia, Lv. 16:15
   TRAIN B:
   New Orleans, Lv. 13:00
   Jackson, Arr. 16:00
   TRAIN C:
   New Orleans, Lv. 15:00
   Magnolia, Lv. 16:45
   McComb, Lv. 17:00
   Brookhaven, Arr. 17:30, Lv. 17:45
   Jackson, Arr. 19:00
4. 105 km/h
   [Hour interval: 12:00 to 13:00,
   Distance in km: 105 - 0 = 105]
5. 75 km/h
   [Hour interval: 13:45 to 14:45,
   Distance in km: 75 - 0 = 75]
6. 75 km/h
   [Hour interval: 14:15 to 15:15,
   Distance in km: 135 - 60 = 75]
7. 60 km/h
   [Hour interval: 13:45 to 14:45,
   Distance in km: 165 - 105 = 60]
8. 60 km/h
   [Hour interval: 17:45 to 18:45,
   Distance in km: 270 - 210 = 60]

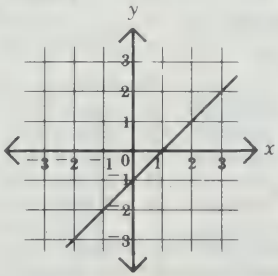
Page 318

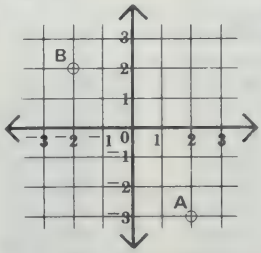
Chapter Test

1. J(3, 2)
2. 

3. 2, 2, 4
4. 

5. R(⁻3, 2)
6. 

7. 0, ⁻3, 3
8. 

9. ⁻15°C
10. 

11. 15 m
12. 12:45

Page 319

Skills Tune-up

1. $\frac{21}{40}$	10. $6\frac{7}{8}$
2. $\frac{1}{12}$	11. $\frac{17}{28}$
3. $\frac{7}{16}$	12. $3\frac{1}{12}$
4. $\frac{1}{4}$	13. $\frac{15}{32}$
5. $5\frac{1}{7}$	14. $10\frac{1}{2}$
6. 21	15. $\frac{3}{16}$
7. $1\frac{1}{9}$	16. $2\frac{1}{2}$
8. $23\frac{2}{5}$	17. $\frac{1}{6}$
9. 5	18. $2\frac{11}{14}$

1. $1\frac{1}{6}$	10. $11\frac{3}{10}$
2. $1\frac{5}{24}$	11. $9\frac{11}{18}$
3. $1\frac{1}{6}$	12. $15\frac{11}{30}$
4. $1\frac{3}{20}$	13. $3\frac{1}{4}$
5. $\frac{1}{3}$	14. $1\frac{5}{6}$
6. $\frac{2}{9}$	15. $4\frac{1}{8}$
7. $\frac{11}{20}$	16. $3\frac{7}{10}$
8. $\frac{7}{24}$	17. $2\frac{13}{24}$
9. $11\frac{1}{2}$	18. $4\frac{1}{3}$

1. 0.09	15. 80%
2. 0.35	16. 3%
3. 0.921	17. $\frac{3}{50}$
4. 0.0035	18. $\frac{1}{4}$
5. 0.0624	19. $\frac{1}{200}$
6. 0.001	20. $1\frac{6}{25}$
7. 0.27	21. $\frac{2}{25}$
8. 0.0525	22. $\frac{2}{3}$
9. 4%	23. $\frac{13}{100}$
10. 92.3%	24. $\frac{3}{4}$
11. 37.5%	25. 60%
12. 236%	26. 62.5%
13. 79%	27. 125%
14. 24.3%	28. $\frac{1}{2}$%

29. $57\frac{1}{7}\%$ 31. 150%

30. $56\frac{1}{4}\%$ 32. $16\frac{2}{3}\%$

Page 320

Calculator Exercises

Yes and no answers may vary.

The answer will be "yes" for most calculators when the second number in the problem is positive (exercises 1, 4, 8, 11). The answer will be "no" for most calculators when the second number is negative (exercises 2, 3, 6, 7, 9, 10, 12, 13).

1. 350
2. ⁻350
3. ⁻1150
4. ⁻350
5. ⁻1150
6. 1150
7. 350
8. ⁻300 000
9. ⁻300 000
10. 300 000
11. ⁻370
12. ⁻370
13. 370
14. Instructions manuals for students' calculators might contain suggestions for working with positive and negative numbers on individual calculators. In general, to enter a negative number, enter the digits first and then press the change sign key. For example, in exercise 1, press these keys:
    400 CS + 750 =
15. 30.63
16. 34.296
17. 234.117
18. 144.224
19. 1.2
20. 15.95
21. 49.8
22. 6.2
23. 1.5
24. 12 777.855
25. 2.84 6.36 9.88, 13.4
26. $185.52
27. $57.00
28. $195.48
29. $200.52
30. $378.62
31. $653.70
32. $596.50
33. $552.57
34. $380.21

Page 323

Pretest

A 50 cm
B 17.5 m
C 52.752 m
D 56.52 m
E 35.84 cm^2
F 23.04 mm^2
G 18 m^2
H 150 cm^2
I 58.8 cm^2
J 113.04 m^2
K 113.04 cm^2

Page 324

Set A

1. 72 cm
2. 80 cm
3. 62 cm
4. 5.4 cm
5. 9 cm
6. 6.8 cm
7. 100 cm
8. 40.4 m
9. 116.2 m
10. 566 mm
11. 28.66 m
12. 54.86 m

Page 325

Set B

1. 84 cm
2. 22.2 cm
3. 63.8 cm
4. 48.3 cm
5. 99 m
6. 26.4 m
7. 146 m
8. 268 m
9. 2.1 m
10. 36 m
11. 101 m
12. 11.74 m

Break Time: First: Virginia, Second: Machiko, Third: Janice

Page 326

Set C

1. 25.12 m
2. 21.98 cm
3. 125.6 mm
4. 78.5 m
5. 314 cm
6. 213.52 mm
7. 31.4 cm
8. 157 mm
9. 282.6 m
10. 628 mm
11. 1256 m
12. 2198 cm
13. 310.86 mm
14. 47.1 mm
15. 116.18 cm
16. 59.66 km
17. 131.88 m
18. 191.54 cm
19. 235.5 cm
20. 69.08 km
21. 502.4 km
22. 879.2 m
23. 1099 cm
24. 345.4 mm
25. 3014.4 mm
26. 1789.8 cm

Page 327

Set D

1. 18.84 cm
2. 31.4 m
3. 37.68 mm
4. 62.8 m
5. 75.36 cm
6. 257.48 m
7. 445.88 cm
8. 628 mm
9. 12.56 m
10. 25.12 cm
11. 43.96 km
12. 125.6 cm
13. 314 m
14. 502.4 mm
15. 565.2 cm
16. 1884 mm
17. 3768 mm
18. 5652 mm
19. 94.2 km
20. 238.64 cm
21. 577.76 cm
22. 753.6 mm
23. 4647.2 cm
24. 3516.8 mm

Break Time:

Possible solutions include the four shown in the table.

$1	$3	$6
12	0	8
9	5	6
6	10	4
3	15	2

Page 329

Set E

1. 4.5 m^2
2. 273 cm^2
3. 1.04 m^2
4. 120 mm^2
5. 84 cm^2
6. 1.05 m^2
7. 2.34 cm^2
8. 16.2 cm^2
9. 0.0312 m^2
10. 0.0532 m^2
11. 1.0272 m^2
12. 2.03 cm^2
13. 11.043 cm^2
14. 27.208 m^2

Set F

1. 5625 mm^2
2. 73.96 m^2
3. 24.01 cm^2
4. 100 mm^2
5. 225 mm^2
6. 3.24 cm^2
7. 6.25 m^2
8. 14.44 cm^2
9. 146.41 cm^2
10. 0.2304 m^2
11. 0.8464 m^2

12. 57.76 cm^2
13. 16.9744 m^2
14. 2.89 cm^2

Set G

1. 2.43 m^2
2. 483 cm^2
3. 2.28 m^2
4. 180 mm^2
5. 750 mm^2
6. 2.07 cm^2
7. 1.02 m^2
8. 0.4 m^2
9. 13.92 cm^2
10. 0.285 m^2
11. 1.7612 m^2
12. 1.28 m^2
13. 11.8584 m^2
14. 477.63 cm^2

Page 331

Set H

1. 165 m^2
2. 120 cm^2
3. 180 m^2
4. 14 km^2
5. 216 mm^2
6. 0.75 cm^2
7. 137.5 mm^2
8. 3.875 m^2
9. 0.0216 m^2
10. 1.8 cm^2
11. 8.36 cm^2
12. 165.375 cm^2
13. 198.375 m^2
14. 36.4 m^2

Set I

1. 81 m^2
2. 2.22 cm^2
3. 29.8 cm^2
4. 136 cm^2
5. 4 cm^2
6. 88.2 cm^2
7. 81 cm^2
8. 1250 cm^2
9. 1.17 cm^2
10. 5.5 cm^2
11. 21.21 cm^2
12. 7.5 cm^2

Break Time:

376
X 45
1880
15040
16920

239
X 54
956
11950
12906

117
X 319
1053
1170
35100
37323

Page 333

Set J

1. 28.26 cm^2
2. 50.24 cm^2
3. 1256 mm^2
4. 5024 mm^2
5. 1962.5 cm^2
6. 803.84 m^2
7. 113.04 mm^2
8. 78.5 mm^2
9. 12.56 km^2
10. 3.14 km^2
11. 153.86 m^2
12. 254.34 cm^2
13. 314 mm^2
14. 31 400 mm^2
15. 20 096 mm^2
16. 25 434 cm^2
17. 5024 cm^2
18. 2826 m^2
19. 11 304 cm^2
20. 1962.5 m^2
21. 17 662.5 mm^2
22. 1384.74 mm^2
23. 9156.24 mm^2
24. 4775.94 cm^2
25. 19 103.76 cm^2
26. 907.46 m^2
27. 3215.36 cm^2
28. 12 861.44 mm^2

Set K

1. 314 mm^2
2. 254.34 cm^2
3. 153.86 m^2
4. 200.96 mm^2
5. 1256 mm^2
6. 2826 cm^2
7. 6358.5 mm^2
8. 530.66 cm^2
9. 78.5 m^2
10. 12.56 m^2
11. 113.04 cm^2
12. 50.24 mm^2
13. 20 096 mm^2
14. 7850 mm^2
15. 31 400 mm^2
16. 5024 cm^2
17. 452.16 m^2
18. 1661.06 mm^2
19. 803.84 cm^2
20. 1962.5 cm^2
21. 3846.5 cm^2
22. 615.44 cm^2
23. 1017.36 mm^2
24. 6936.26 mm^2

Page 334

Posttest

A 46 cm
B 11 m
C 46.472 m
D 43.96 m
E 46.08 cm^2
F 51.84 mm^2
G 8 cm^2
H 216 mm^2
I 13.68 m^2
J 78.5 m^2
K 176.625 cm^2

Page 335

Measurements may vary slightly.

1. 5 m by 7 m [25 X 0.2 = 5, 35 X 0.2 = 5]
   35 m^2 [5 X 7 = 35]
2. 5 m by 6 m [25 X 0.2 = 5, 30 X 0.2 = 6]
   30 m^2 [5 X 6 = 30]
3. 4 m by 5 m [20 X 0.2 = 4, 25 X 0.2 = 5]
   20 m^2 [4 X 5 = 20]
4. 4 m by 4 m [20 X 0.2 = 4, 20 X 0.2 = 4]
   16 m^2 [4 X 4 = 16]
5. Living room: $242.20
   [35 X 6.92 = 242.20]
   Master bedroom: $207.60
   [30 X 6.92 = 207.60]
   Guest bedroom: $138.40
   [20 X 6.92 = 138.40]
   Study: $110.72
   [16 X 6.92 = 110.72]
6. Living room: $279.65
   [35 X 7.99 = 279.65]
   Master bedroom: $239.70
   [30 X 7.99 = 239.70]
   Guest bedroom: $159.80
   [20 X 7.99 = 159.80]
   Study: $127.84
   [16 X 7.99 = 127.84]
7. Living room: $349.65
   [35 X 9.99 = 349.65]
   Master bedroom: $299.70
   [30 X 9.99 = 299.70]
   Guest bedroom: $199.80
   [20 X 9.99 = 199.80]
   Study: $159.84
   [16 X 9.99 = 159.84]

Page 337

1. 1320 m^2
   [50 X 30 = 1500,
   18 X 10 = 180,
   1500 - 180 = 1320]
2. 1090 m^2
   [50 X 25 = 1250,
   16 X 10 = 160,
   1250 - 160 = 1090]
3. 3330 m^2
   [70 X 50 = 3500,
   17 X 10 = 170,
   3500 - 170 = 3330]

4. 2360 m^2
[65 X 40 = 2600,
20 X 12 = 240,
2600 - 240 = 2360]
5. 5100 m^2
[90 X 60 = 5400,
20 X 15 = 300,
5400 - 300 = 5100]
6. 3584 m^2
[70 X 55 = 3850,
19 X 14 = 266,
3850 - 266 = 3584]
7. 3563 m^2
[75 X 50 = 3750,
17 X 11 = 187,
3750 - 187 = 3563]
8. 1996 m^2
[55 X 40 = 2200,
17 X 12 = 204,
2200 - 204 = 1996]
9. 2508 m^2
[60 X 45 = 2700,
16 X 12 = 192,
2700 - 192 = 2508]
10. 3002 m^2
[80 X 40 = 3200,
18 X 11 = 198,
3200 - 198 = 3002]
11. 1206 m^2
[45 X 30 = 1350,
16 X 9 = 144,
1350 - 144 = 1206]
12. 2814 m^2
[70 X 45 = 3150,
21 X 16 = 336,
3150 - 336 = 2814]
13. 4533 m^2
[85 X 60 = 5100,
27 X 21 = 567,
5100 - 567 = 4533]
14. 3963 m^2
[80 X 55 = 4400,
23 X 19 = 437,
4400 - 437 = 3963]
15. 2166 m^2
[60 X 40 = 2400,
18 X 13 = 234,
2400 - 234 = 2166]
16. 1465 m^2
[50 X 35 = 1750,
19 X 15 = 285,
1750 - 285 = 1465]
17. 4126 m^2
[75 X 60 = 4500,
22 X 17 = 374,
4500 - 374 = 4126]
18. 1621 m^2
[55 X 35 = 1925,
19 X 16 = 304,
1925 - 304 = 1621]
19. 2914 m^2
[65 X 50 = 3250,
21 X 16 = 336,
3250 - 336 = 2914]
20. Ex. 1: 27 kg $\left[\frac{30}{1500} = \frac{n}{1320}\right]$

Ex. 2: 22 kg $\left[\frac{30}{1500} = \frac{n}{1090}\right]$

Ex. 3: 67 kg $\left[\frac{30}{1500} = \frac{n}{3330}\right]$

Ex. 4: 48 kg $\left[\frac{30}{1500} = \frac{n}{2360}\right]$

Ex. 5: 102 kg $\left[\frac{30}{1500} = \frac{n}{5100}\right]$

Ex. 6: 72 kg $\left[\frac{30}{1500} = \frac{n}{3584}\right]$

Ex. 7: 72 kg $\left[\frac{30}{1500} = \frac{n}{3563}\right]$

Ex. 8: 40 kg $\left[\frac{30}{1500} = \frac{n}{1996}\right]$

Ex. 9: 51 kg $\left[\frac{30}{1500} = \frac{n}{2508}\right]$

Ex. 10: 61 kg $\left[\frac{30}{1500} = \frac{n}{3002}\right]$

Ex. 11: 25 kg $\left[\frac{30}{1500} = \frac{n}{1206}\right]$

Ex. 12: 57 kg $\left[\frac{30}{1500} = \frac{n}{2814}\right]$

Ex. 13: 91 kg $\left[\frac{30}{1500} = \frac{n}{4533}\right]$

Ex. 14: 80 kg $\left[\frac{30}{1500} = \frac{n}{3963}\right]$

Ex. 15: 44 kg $\left[\frac{30}{1500} = \frac{n}{2166}\right]$

Ex. 16: 30 kg $\left[\frac{30}{1500} = \frac{n}{1465}\right]$

Ex. 17: 83 kg $\left[\frac{30}{1500} = \frac{n}{4126}\right]$

Ex. 18: 33 kg $\left[\frac{30}{1500} = \frac{n}{1621}\right]$

Ex. 19: 59 kg $\left[\frac{30}{1500} = \frac{n}{2914}\right]$

Page 339

1. 69.99 cm
[$\frac{1}{2}$ X 4 = 2, 5 + 2 = 7,
2 X 3.14 X 7 = 43.96,
$\frac{1}{4}$ X 43.96 = 10.99,
35 + 10.99 + 24 = 69.99]
2. 97.85 cm
[$\frac{1}{2}$ X 6 = 3, 2 + 3 = 5,
2 X 3.14 X 5 = 31.4,
$\frac{1}{4}$ X 31.4 = 7.85,
42 + 7.85 + 48 = 97.85]
3. 93.635 cm
[$\frac{1}{2}$ X 5 = 2.5, 2.5 + 3 = 5.5,
2 X 3.14 X 5.5 = 34.54,
$\frac{1}{4}$ X 34.54 = 8.635,
51 + 8.635 + 34 = 93.635]
4. 87.26 cm
[$\frac{1}{2}$ X 6 = 3, 3 + 6 = 9,
2 X 3.14 X 9 = 56.52,
$\frac{1}{4}$ X 56.52 = 14.13,
20 + 14.13 + 14.13 + 39 = 87.26]
5. 133.12 cm
[$\frac{1}{2}$ X 8 = 4, 4 + 4 = 8,
2 X 3.14 X 8 = 50.24,
$\frac{1}{4}$ X 50.24 = 12.56, 28 + 12.56 +
15 + 12.56 + 65 = 133.12]

Page 340

Chapter Test

1. 42 m [2(12.5) + 2(8.5) = 42]
2. 9.4 m [1.5 + 2.3 + 2.0 +
1.7 + 1.9 = 9.4]
3. 38.622 cm
[3.14 X 12.3 = 38.622]
4. 94.2 mm
[2 X 3.14 X 15 = 94.2]
5. 62.56 cm^2
[6.8 X 9.2 = 62.56]
6. 32.49 mm^2
[$(5.7)^2$ = 32.49]
7. 15.6 cm^2
[6.0 X 2.6 = 15.6]
8. 140 m^2
[$\frac{1}{2}$ X 20 X 14 = 140]
9. 4.76 m^2
[$\frac{1}{2}$ X 1.7 X (2.1 + 3.5) = 4.76]
10. 200.96 mm^2
[3.14 X 8^2 = 200.96]
11. 254.34 cm^2
[3.14 X 9^2 = 254.34]
12. $239.76 [6 X 4 = 24,
24 X 9.99 = 239.76]
13. 52 kg $\left[\frac{30}{1500} = \frac{n}{2556}\right]$

14. 65.42 cm
[$\frac{1}{2}$ X 4 = 2, 2 + 4 = 6,
2 X 3.14 X 6 = 37.68,
$\frac{1}{4}$ X 37.68 = 9.42,
18 + 9.42 + 38 = 65.42]

Page 341

Pretest
A 550 cm^2
B 4704 mm^2
C 2009.6 m^2
D 4.32 m^3
E 753.571 cm^3

Page 342

Pretest (continued)
F 314 m^3
G 763.02 cm^3
H 192 m^3
I 1186.92 cm^3
J 14 130 m^3
K 113.04 cm^3

Page 343

Set A
1. 490 cm^2
2. 1872 mm^2
3. 22.5 m^2
4. 1090 mm^2
5. 532 cm^2
6. 10 456 cm^2
7. 138.48 m^2
8. 27 848 mm^2
9. 26.38 m^2
10. 135.98 m^2

Page 344

Set B
1. 5046 mm^2
2. 11 094 m^2
3. 403.44 cm^2
4. 3174 mm^2
5. 11.76 m^2
6. 1350 cm^2
7. 2.94 m^2
8. 508 086 cm^2
9. 20 184 mm^2
10. 223.26 cm^2
11. 3750 mm^2
12. 507.84 cm^2
13. 73.5 m^2
14. 13 824 mm^2
15. 8214 m^2
16. 9600 cm^2
17. 864 m^2
18. 0.54 m^2
19. 72 600 cm^2
20. 10 086 mm^2
21. 168.54 m^2
22. 15 000 cm^2
23. 38 400 mm^2
24. 253.5 m^2
25. 3174 mm^2

Page 345

Set C
1. 18.84 m^2
2. 395.64 cm^2
3. 7724.4 mm^2
4. 87.92 m^2
5. 62.8 cm^2
6. 10 362 mm^2
7. 866.64 cm^2
8. 175.84 m^2
9. 1758.4 cm^2
10. 25 120 mm^2
11. 596.6 m^2
12. 659.4 cm^2
13. 5526.4 mm^2

Page 347

Set D
1. 256 cm^3
2. 101.25 m^3
3. 384 cm^3
4. 3344 mm^3
5. 1625 cm^3
6. 3.41 m^3
7. 253 800 cm^3
8. 5.6 m^3
9. 10 710 cm^3
10. 194 996 mm^3

Set E
1. 421 875 cm^3
2. 6.859 m^3
3. 1 124 864 mm^3
4. 12 167 m^3
5. 0.064 m^3
6. 531 441 mm^3
7. 50.653 m^3
8. 110 592 cm^3
9. 125 000 cm^3
10. 3.375 m^3
11. 32 768 cm^3
12. 1000 m^3
13. 24.389 m^3
14. 343 m^3
15. 1771.561 cm^3
16. 175 616 mm^3
17. 8000 m^3
18. 658 503 mm^3
19. 250 047 cm^3
20. 778 688 m^3
21. 1 000 000 cm^3
22. 74 088 mm^3
23. 216 m^3
24. 195.112 cm^3
25. 830 584 cm^3

Page 348

Set F
1. 1356.48 m^3
2. 24 925.32 m^3
3. 175.84 cm^3
4. 4082 cm^3
5. 5024 mm^3
6. 314 m^3
7. 80 384 cm^3
8. 2034.72 m^3
9. 125 235.76 mm^3
10. 408 074.4 cm^3
11. 791.28 cm^3
12. 59.66 m^3

Page 349

Set G
1. 351.68 cm^3
2. 452.16 m^3
3. 6154.4 cm^3
4. 254.34 m^3
5. 7630.2 cm^3
6. 628 m^3
7. 9382.32 mm^3
8. 238.64 m^3
9. 14 130 cm^3
10. 153.860 cm^3
11. 65.94 m^3
12. 14 616.7 cm^3

Break Time: 536.8 m^3

Page 351

Set H
1. 24 cm^3
2. 720 m^3
3. 1998 cm^3
4. 336 cm^3
5. 4800 cm^3
6. 4950 mm^3
7. 4420 cm^3
8. 27.2 m^3
9. 140 244 mm^3
10. 42.32 m^3

Set I
1. 25.12 m^3
2. 1017.36 m^3
3. 15 232.14 cm^3

4. 103.62 cm^3
5. 602.88 cm^3
6. 78.5 m^3
7. 40 506 mm^3
8. 200.96 cm^3
9. 226.08 m^3
10. 5338 cm^3
11. 923.16 cm^3
12. 15 072 mm^3

Page 352

Set J

1. 113.04 m^3
2. 14 130 mm^3
3. 4186.67 cm^3
4. 267.95 cm^3
5. 33.49 m^3
6. 1436.03 m^3
7. **267 946.67 cm^3**
8. 4.19 m^3
9. 113 040 cm^3
10. 3052.08 m^3
11. 2143.57 cm^3
12. 904 320 mm^3
13. 4 186 666.67 mm^3
14. 24 416.64 cm^3
15. 82 406.16 mm^3
16. 7234.56 cm^3
17. 523 333.33 m^3
18. 3 052 080 mm^3
19. 38 772.72 cm^3
20. 195 333.12 mm^3

Set K

1. 904.32 cm^3
2. 4.19 m^3
3. 82 406.16 mm^3
4. 113 040 000 cm^3
5. 267.95 m^3
6. 5572.45 cm^3
7. 523.33 m^3
8. 7 234 560 m^3
9. 150 456.24 mm^3
10. 381 510 m^3
11. 113.04 m^3
12. 555 365.5 cm^3
13. 14 130 mm^3
14. 1436.03 m^3
15. 659 249.28 cm^3
16. 4 186 666.67 cm^3
17. 3052.08 mm^3
18. 3 052 080 cm^3
19. 463 011.83 m^3
20. 248 348.88 cm^3

Page 353

Posttest

A 42.48 m^2
B 7776 mm^2
C 565.2 m^2
D 10 290 mm^3
E 421.875 cm^3

Page 354

Posttest (continued)

F 28 260 cm^3
G 226.08 m^3
H 245 m^3
I 4710 mm^3
J 3052.08 m^3
K 113 040 m^3

Page 355

1. 602.88 cm^3
   [3.14 X 4^2 X 12 = 602.88]
2. 904.32 cm^3
   [$\frac{4}{3}$ X 3.14 X 6^3 = 904.32]
3. 350 cm^3
   [5 X 5 X 14 = 350]
4. 489.84 cm^3
   [$\frac{1}{3}$ X 3.14 X 6^2 X 13 = 489.84]
5. 543 g
   [0.9 X 602.88 = 542.592]
6. 814 g
   [0.9 X 904.32 = 813.888]
7. 315 g
   [0.9 X 350 = 315]
8. 441 g
   [0.9 X 489.84 = 440.856]
9. 2715 g
   [5 X 543 = 2715]
10. 4884 g
    [6 X 814 = 4884]
11. 2205 g
    [7 X 315 = 2205]
12. 1764 g
    [4 X 441 = 1764]
13. 11 568 g
14. 24 slabs
    [11 568 ÷ 500 = 23 R68]
15. **$9.36**
    [0.39 X 24 = 9.36]

Pages 356–357

1. 0.675
2. 1.809
3. 5.5 X 0.3 X 0.9; 1.485
4. 5.5 X 0.3 X 0.9; 1.485
5. 6 m^3 [0.675 + 1.809 + 1.485 + 1.485 = 5.454]
6. $210 [35 X 6 = 210]
7. $140 [35 X 4 = 140]

8.	– – –	– – –	7.04
9.	7.1 X 2.4	17.04	17.04
10.	5.5 X 2.4	13.2	12.2
11.	5.5 X 2.4	13.2	12.7
12.	– – –	– – –	48.98

13. 48 980 000 mm^2
    [48.98 X 1 000 000 = 48 980 000]
14. 80 000 mm^2
    [400 X 200 = 80 000]
15. 613 blocks
    [48 980 000 ÷ 80 000 = 612.25]
16. **$355.54**
    [0.58 X 613 = 355.54]
17. $1320.54 [250 + 290 + 75 + 210 + 140 + 355.54 = 1320.54]

Page 359

1. 78.5 cm^2 [3.14 X 5^2 = 78.5]
   392.5 cm^3 [78.5 X 5 = 392.5]
   1570 cm^3 [392.5 X 4 = 1570]
2. 3 cm [$\frac{1}{2}$ (6) = 3]
   28.26 cm^2 [3.14 X 3^2 = 28.26]
   282.6 cm^3 [28.26 X 10 = 282.6]
   1695.6 cm^3 [282.6 X 6 = 1695.6]
3. 3.5 cm, 38.465 cm^2
   307.72 cm^3, 2461.76 cm^3
4. 3 cm, 28.26 cm^2
   231.73 cm^3, 1853.84 cm^3
5. 2.5 cm, 19.625 cm^2
   157 cm^3, 1256 cm^3
6. 2 cm, 12.56 cm^2
   50.24 cm^3, 200.96 cm^3
7. 4.5 cm, 63.585 cm^2
   445.095 cm^3, 2670.57 cm^3
8. 2 cm, 12.56 cm^2
   62.8 cm^3, 376.8 cm^3
9. 1.9 cm, 11.3354 cm^2
   68.0124 cm^3, 272.0496 cm^3
10. 3.6 cm, 40.6944 cm^2
    325.5552 cm^3, 2604.4416 cm^3

Page 360

Chapter Test

1. 224 cm^2 [2(12)(4) + 2(12)(4) + 2(4)(4) = 224]
2. 2166 mm^2 [$6(19)^2$ = 2166]
3. 533.8 cm^2 [2(3.14)(5)(12) + $2(3.14)(5)^2$ = 533.8]
4. 168.75 m^3
   [7.5 X 7.5 X 3.0 = 168.75]
5. 314.432 cm^3
   [6.8 X 6.8 X 6.8 = 314.432]

6. 84.78 m^3
   [3.14 X 3^2 X 3 = 84.78]
7. 2000.18 m^3
   [3.14 X 7^2 X 13]
8. 648 cm^3
   [$\frac{1}{3}$ X 18 X 9 X 12 = 648]
9. 6430.72 cm^3 [$\frac{1}{3}$ X
   3.14 X 16^2 X 24 = 6430.72]
10. 904.32 m^3
    [$\frac{4}{3}$ X 3.14 X 6^3 = 904.32]
11. 38 772.72 m^3
    [$\frac{4}{3}$ X 3.14 X 21^3 = 38 772.72]
12. 1205.76 cm^3 [$\frac{1}{3}$ X
    3.14 X 8^2 X 18 = 1205.76]
13. 8 m^3 [5 X 8 X 0.2 = 8]
14. 628 cm^3 [$\frac{1}{2}$ (10) = 5,
    3.14 X 5^2 = 78.5, 78.5 X 8 = 628]

Page 361

Pretest

A 125
B 8
C 1225
D 6.8
E 89
F 7.8 cm
G 14 m

Page 362

Pretest (continued)

H $\frac{10}{24} \doteq 0.417$

I $\frac{10}{26} \doteq 0.385$

J $\frac{24}{26} \doteq 0.923$

K 0.325
L 0.682
M 0.616
N 19.2 cm
O 5.2 cm
P. 37.5 m

Page 363

Set A

1. 25
2. 216
3. 16
4. 7
5. 1
6. 8
7. 243
8. 49
9. 169
10. 32
11. 10
12. 100
13. 1000
14. 10 000
15. 100 000
16. 10 000 000
17. 1 000 000 000
18. 125
19. 16
20. 78
21. 256
22. 324
23. 1
24. 26.01
25. 0.49
26. 8000
27. 625
28. 1.728
29. 625
30. 0.0016

Set B

1. 3
2. 2
3. 7
4. 10
5. 11
6. 1
7. 12
8. 4
9. 15
10. 20
11. 30
12. 40
13. 14
14. 50
15. 25
16. 100
17. 13
18. 70

Page 364

Set C

1. 3721
2. 361
3. 7569
4. 2916
5. 1444
6. 3249
7. 900
8. 289
9. 6889
10. 441
11. 9801
12. 2704
13. 1600
14. 3844
15. 7744

Set D

1. 3.9
2. 9.4
3. 6.3
4. 7.5
5. 1.4
6. 4.8
7. 7.7
8. 1.7
9. 8.0
10. 2.8
11. 6.2
12. 4.1
13. 7.0
14. 5.1
15. 8.7

Set E

1. 88
2. 66
3. 26
4. 15
5. 59
6. 49
7. 34
8. 98
9. 85
10. 22

Page 365

Break Time: 24 000 km

Page 367

Set F

1. 8.1 m
2. 75 cm or 75.0 cm
3. 13.4 m
4. 5.8 mm
5. 106 m or 106.0 m
6. 12.8
7. 41 or 41.0
8. 9.9
9. 11.4
10. 13 or 13.0
11. 7.2
12. 13.6
13. 29 or 29.0
14. 25 or 25.0
15. 13.5
16. 13.9
17. 17 or 17.0
18. 6.7

Set G

1. 5.3 cm
2. 120 m or 120.0 m
3. 55 m or 55.0 mm
4. 4.4 cm
5. 16 m or 16.0 m
6. 6.9
7. 40 or 40.0
8. 42 or 42.0
9. 13.7
10. 10.7
11. 135 or 135.0
12. 1.7
13. 72 or 72.0
14. 9.8
15. 8.7
16. 90 or 90.0
17. 9.1
18. 120 or 120.0

Page 369

Set H

1. $\tan \angle J = \frac{20}{21} \doteq 0.952$
   $\sin \angle J = \frac{20}{29} \doteq 0.690$
   $\cos \angle J = \frac{21}{29} \doteq 0.724$
2. $\tan \angle V = \frac{8}{6} \doteq 1.333$
   $\sin \angle V = \frac{8}{10} = 0.800$
   $\cos \angle V = \frac{6}{10} = 0.600$
3. $\tan \angle M = \frac{5}{12} \doteq 0.417$
   $\sin \angle M = \frac{5}{13} \doteq 0.385$
   $\cos \angle M = \frac{12}{13} \doteq 0.923$
4. $\tan \angle Y = \frac{7}{24} \doteq 0.292$
   $\sin \angle Y = \frac{7}{25} = 0.280$
   $\cos \angle Y = \frac{24}{25} = 0.960$
5. $\tan \angle K = \frac{24}{7} \doteq 3.429$
   $\sin \angle K = \frac{24}{25} = 0.960$
   $\cos \angle K = \frac{7}{25} = 0.280$
6. $\tan \angle T = \frac{35}{12} \doteq 2.917$
   $\sin \angle T = \frac{35}{37} \doteq 0.946$
   $\cos \angle T = \frac{12}{37} \doteq 0.324$

7. $\tan \angle X = \frac{12}{35} \doteq 0.343$

   $\sin \angle X = \frac{12}{37} \doteq 0.324$

   $\cos \angle X = \frac{35}{37} \doteq 0.946$

8. $\tan \angle S = \frac{28}{45} \doteq 0.622$

   $\sin \angle S = \frac{28}{53} \doteq 0.528$

   $\cos \angle S = \frac{45}{53} \doteq 0.849$

9. $\tan \angle D = \frac{45}{28} \doteq 1.607$

   $\sin \angle D = \frac{45}{53} \doteq 0.849$

   $\cos \angle D = \frac{28}{53} \doteq 0.528$

10. $\tan \angle B = \frac{9}{40} = 0.225$

    $\sin \angle B = \frac{9}{41} \doteq 0.220$

    $\cos \angle B = \frac{40}{41} \doteq 0.976$

11. $\tan \angle P = \frac{40}{9} \doteq 4.444$

    $\sin \angle P = \frac{40}{41} \doteq 0.976$

    $\cos \angle P = \frac{9}{41} \doteq 0.220$

12. $\tan \angle R = \frac{154}{72} \doteq 2.139$

    $\sin \angle R = \frac{154}{170} \doteq 0.906$

    $\cos \angle R = \frac{72}{170} \doteq 0.424$

13. $\tan \angle G = \frac{72}{154} \doteq 0.468$

    $\sin \angle G = \frac{72}{170} \doteq 0.424$

    $\cos \angle G = \frac{154}{170} \doteq 0.906$

14. $\tan \angle Z = \frac{63}{16} \doteq 3.938$

    $\sin \angle Z = \frac{63}{65} \doteq 0.969$

    $\cos \angle Z = \frac{16}{65} \doteq 0.246$

15. $\tan \angle F = \frac{16}{63} \doteq 0.254$

    $\sin \angle F = \frac{16}{65} \doteq 0.246$

    $\cos \angle F = \frac{63}{65} \doteq 0.969$

Set I

1-15. See Set H.

Set J

1-15. See Set H.

Page 370

Set K

1.	0.158	6.	0.900
2.	0.532	7.	14.301
3.	3.732	8.	0.424
4.	0.231	9.	28.636
5.	1.483	10.	0.070

Set L

1.	0.946	6.	0.602
2.	0.809	7.	0.755
3.	0.500	8.	0.891
4.	0.208	9.	0.276
5.	0.995	10.	0.927

Set M

1.	0.946	6.	0.391
2.	0.998	7.	0.530
3.	0.643	8.	0.914
4.	0.139	9.	0.707
5.	0.857	10.	0.469

Page 371

Break Time:
Smaller circle: 15.7 m
Larger circle: 22.2 m
Smaller square: 50.9 m
Larger square: 72.0 m

Page 373

Set N

1.	11.0 m	6.	26.1 m
2.	11.5 cm	7.	104.6 m
3.	34.7 cm	8.	30.9 mm
4.	81.0 mm	9.	46.7 cm
5.	3.9 m	10.	118.6 m

Set O

1. 12.5 cm
2. 4.9 m
3. 30.6 m
4. 10.1 mm
5. 5.2 cm
6. 3.9 m
7. 8.5 m
8. 2.9 cm
9. 25.4 mm
10. 179.8 cm

Set P

1. 13.5 m
2. 3.9 cm
3. 178.1 mm
4. 45.1 m
5. 41.7 cm
6. 0.8 m
7. 42.1 mm
8. 19.2 cm
9. 56.3 mm
10. 94.3 m

Page 374

Posttest

A 1024
B 6
C 11 449
D 5.4
E 118
F 85 m
G 7.2 cm

Page 375

Posttest (continued)

H $\frac{36}{77} \doteq 0.468$

I $\frac{36}{85} \doteq 0.424$

J $\frac{77}{85} \doteq 0.906$

K 0.424
L 0.961
M 0.946
N 9.9 m
O 12.3 cm
P 6.5 cm

Page 377

1. No [$5^2 + 12^2 = 169$, $14^2 = 196$]
2. Yes [$15^2 + 8^2 = 289$, $17^2 = 289$]
3. No [$12^2 + 36^2 = 1440$, $37^2 = 1369$]
4. No [$20^2 + 28^2 = 1184$, $42^2 = 1764$]
5. No [$7^2 + 11^2 = 170$, $13^2 = 169$]
6. Yes [$80^2 + 18^2 = 6724$, $82^2 = 6724$]
7. No [$9^2 + 9^2 = 162$, $12^2 = 144$]
8. Yes [$12^2 + 35^2 = 1369$, $37^2 = 1369$]
9. Yes [$60^2 + 63^2 = 7569$, $87^2 = 7569$]
10. Yes [$7^2 + 24^2 = 625$, $25^2 = 625$]

Page 379

1. 9.9 dm [$7^2 + 7^2 = d^2$, $\sqrt{98} = d$, $9.9 \doteq d$]
2. 5.7 dm [$4^2 + 4^2 = d^2$, $\sqrt{32} = d$, $5.7 \doteq d$]
3. 7.1 dm [$5^2 + 5^2 = d^2$, $\sqrt{50} = d$, $7.1 \doteq d$]

4. 3 dm, 4.2 dm
$[3^2 + 3^2 = d^2, \sqrt{18} = d, 4.2 \doteq d]$
5. 9 dm, 12.7 dm
$[9^2 + 9^2 = d^2, \sqrt{162} = d, 12.7 \doteq d]$
6. 10 dm, 14.1 dm
$[10^2 + 10^2 = d^2, \sqrt{200} = d, 14.1 \doteq d]$
7. 2 dm, 2.8 dm
$[2^2 + 2^2 = d^2, \sqrt{8} = d, 2.8 \doteq d]$
8. 1 dm, 1.4 dm
$[1^2 + 1^2 = d^2, \sqrt{2} = d, 1.4 \doteq d]$
9. 13.9 dm $[o^2 + 8^2 = 16^2, o^2 = 192, o = \sqrt{192}, o \doteq 13.9]$
10. 10.4 dm $[o^2 + 6^2 = 12^2, o^2 = 108, o = \sqrt{108}, o \doteq 10.4]$
11. 6.9 dm $[o^2 + 4^2 = 8^2, o^2 = 48, o = \sqrt{48}, o \doteq 6.9]$
12. 8.7 dm, 5 dm $[10 \div 2 = 5, o^2 + 5^2 = 10^2 \quad o^2 = 75^2, o = \sqrt{75}, o \doteq 8.7]$
13. 3.5 dm, 2 dm $[4 \div 2 = 2, o^2 + 2^2 = 4^2, o^2 = 8, o = \sqrt{8}, o \doteq 3.5]$
14. 5.2 dm, 3 dm $[6 \div 2 = 3, o^2 + 3^2 = 6^2, o^2 = 27, o = \sqrt{27}, o \doteq 5.2]$
15. 1.7 dm, 1 dm $[2 \div 2 = 1, o^2 + 1^2 = 2^2, o^2 = 3, o = \sqrt{3}, o \doteq 1.7]$

Page 381

1. 29.4 m
$\left[0.588 = \frac{DB}{25}, 2 \times 14.7 = 29.4\right]$
2. 16.5 m
$\left[0.588 = \frac{DB}{14}, 2 \times 8.232 = 16.464\right]$
3. 47.0 m
$\left[0.588 = \frac{DB}{40}, 2 \times 23.52 = 47.04\right]$
4. 10.6 m
$\left[0.588 = \frac{DB}{9}, 2 \times 5.292 = 10.584\right]$
5. 14.1 m
$\left[0.588 = \frac{DB}{12}, 2 \times 7.056 = 14.112\right]$
6. 31.8 m
$\left[0.588 = \frac{DB}{27}, 2 \times 15.876 = 31.752\right]$
7. 37.6 m
$\left[0.588 = \frac{DB}{32}, 2 \times 18.816 = 37.632\right]$
8. 21.2 m
$\left[0.588 = \frac{DB}{18}, 2 \times 10.584 = 21.168\right]$
9. 38.8 m
$\left[0.309 = \frac{12}{EB}, 12 \div 0.309 \doteq 38.8\right]$
10. 55.0 m
$\left[0.309 = \frac{17}{EB}, 17 \div 0.309 \doteq 55.0\right]$
11. 77.7 m
$\left[0.309 = \frac{24}{EB}, 24 \div 0.309 \doteq 77.7\right]$
12. 25.9 m
$\left[0.309 = \frac{8}{EB}, 8 \div 0.309 \doteq 25.9\right]$
13. 22.7 m
$\left[0.309 = \frac{7}{EB}, 7 \div 0.309 \doteq 22.7\right]$
14. 51.8 m
$\left[0.309 = \frac{16}{EB}, 16 \div 0.309 \doteq 51.8\right]$
15. 68.0 m
$\left[0.309 = \frac{21}{EB}, 21 \div 0.309 \doteq 68.0\right]$
16. 32.4 m
$\left[0.309 = \frac{10}{EB}, 10 \div 0.309 \doteq 32.4\right]$
17. 6.4 m $[38.2 \div 6 \doteq 6.4]$
18. EG: 72.8 m
$\left[0.809 = \frac{EF}{45}, 2 \times 36.405 = 72.81\right]$
Total: 364.0 m [5 X 72.8 = 364.0]
19. EG: 37.2 m
$\left[0.809 = \frac{EF}{23}, 2 \times 18.607 = 37.214\right]$
Total: 186.0 m [5 X 37.2 = 186.0
20. EG: 40.5 m
$\left[0.809 = \frac{EF}{25}, 2 \times 20.225 = 40.45\right]$
Total: 202.5 m [5 X 40.5 = 202.5]
21. EG: 30.7 m
$\left[0.809 = \frac{EF}{19}, 2 \times 15.371 = 30.742\right]$
Total: 153.5 m [5 X 30.7 = 153.5]
22. 55.0 m
$\left[0.809 = \frac{EF}{34}, 2 \times 27.506 = 55.012\right]$
Total: 275.0 m [5 X 55.0 = 275.0]
23. 45.3 m
$\left[0.809 = \frac{EF}{28}, 2 \times 22.652 = 45.304\right]$
Total: 226.5 m [5 X 45.3 = 226.5]
24. EG: 6.5 m
$\left[0.809 = \frac{EF}{4}, 2 \times 3.236 = 6.472\right]$
Total: 32.5 m [5 X 6.5 = 32.5]
25. EG: 51.8 m
$\left[0.809 = \frac{EF}{32}, 2 \times 25.888 = 51.776\right]$
Total: 259.0 m [5 X 51.8 = 259.0]

Page 382

Chapter Test

1. 64
2. 9
3. 23 409
4. 12.1
5. 86
6. 7.6 m
7. 63 m
8. $\frac{48}{14} \doteq 3.429$
9. $\frac{48}{50} = 0.960$
10. $\frac{14}{50} = 0.280$
11. 0.532
12. 0.656
13. 0.391
14. 5.6 cm
15. 20.6 cm
16. 5.2 m

17. No $[6^2 + 9^2 = 117, 11^2 = 121]$
18. 8.5 dm $[6^2 + 6^2 = d^2, \sqrt{72} = d, 8.5 \doteq d]$
19. 28.2 m

$\left[0.588 = \frac{DB}{24}, 2 \times 14.112 = 28.224\right]$

Page 383

Skills Tune-up

1. $n = 91$
2. $t = 15$
3. $h = 21$
4. $k = 40$
5. $d = 5.2$
6. $m = 54$
7. $w = 3$
8. $a = 1.8$
9. $c = 25$
10. $f = 30$
11. $j = 12$
12. $m = 6$

1. 2.6
2. 32.4
3. 6.8
4. 21
5. [redacted]
6. 50
7. 60%
8. 20%
9. 20%
10. 43%
11. $41\frac{2}{3}$ %
12. $8\frac{1}{3}$ %
13. 50
14. 95
15. 330
16. 24
17. 252
18. 216

1. 2
2. 2
3. $^-38$
4. $^-8$
5. 4.5
6. $^-8.9$
7. $^-11$
8. 19
9. $^-48$
10. $^-12$
11. $^-25.6$
12. $^-0.7$
13. $^-54$
14. $^-96$
15. $^-75$
16. 168
17. $^-16.8$
18. $^-29.45$
19. $^-8$
20. $^-21$
21. 12
22. $^-2.5$
23. $^-4$
24. $^-4.6$
25. 9.7

Page 384

Calculator Exercises

1. 89.2 cm; 633.1 cm^2
2. 194.8 m; 3021.4 m^2
3. 215.3 cm; 3689.9 cm^2
4. 2.7 mm; 0.6 mm^2
5. 5.5 km; 2.4 km^2
6. 1618.9 cm^2; 3848.2 cm^3
7. 10 735.7 mm^2; 75 687.0 mm^3
8. 1411.3 m^2; 3992.7 m^3
9. 1748.7 mm^2; 4813.8 mm^3
10. 677.5 cm^2; 1280.0 cm^3
11. 3.4 mm^2; 0.4 mm^3
12. 39 cm
13. 143 mm
14. 80 m
15. 195 cm
16. Volume $\doteq$ 12 406.9 cm^3
    Cubic centimetres per dollar $\doteq$ 3189.4
17. Volume $\doteq$ 11 951.0 cm^3
    Cubic centimetres per dollar $\doteq$ 3329.0
    Giant size is a better buy.
18. Yes
    5227.4 cm^3
    850.5 cm^3
19. 719.3 m
20. 365.7 m
21. 1810.0 m
22. 452.5 m

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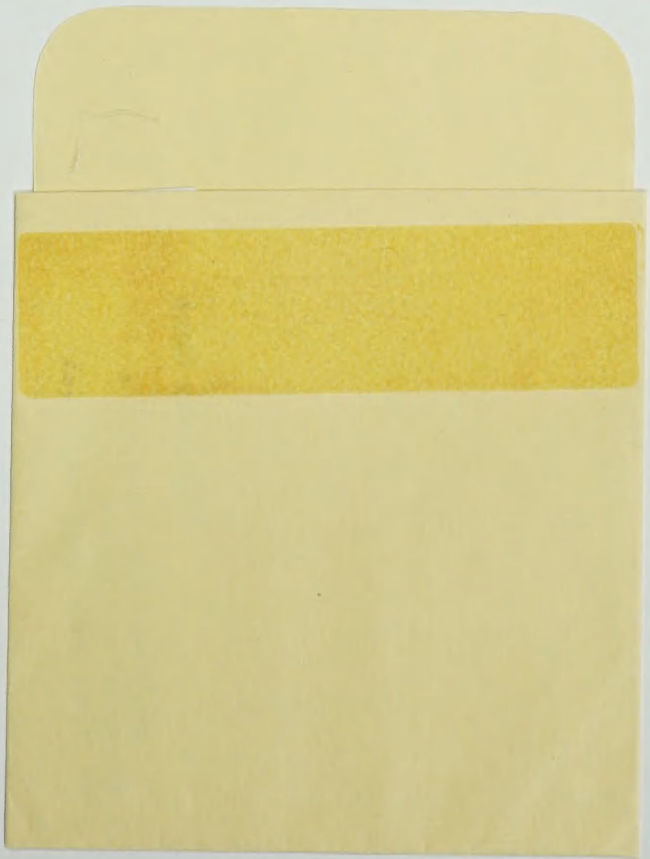

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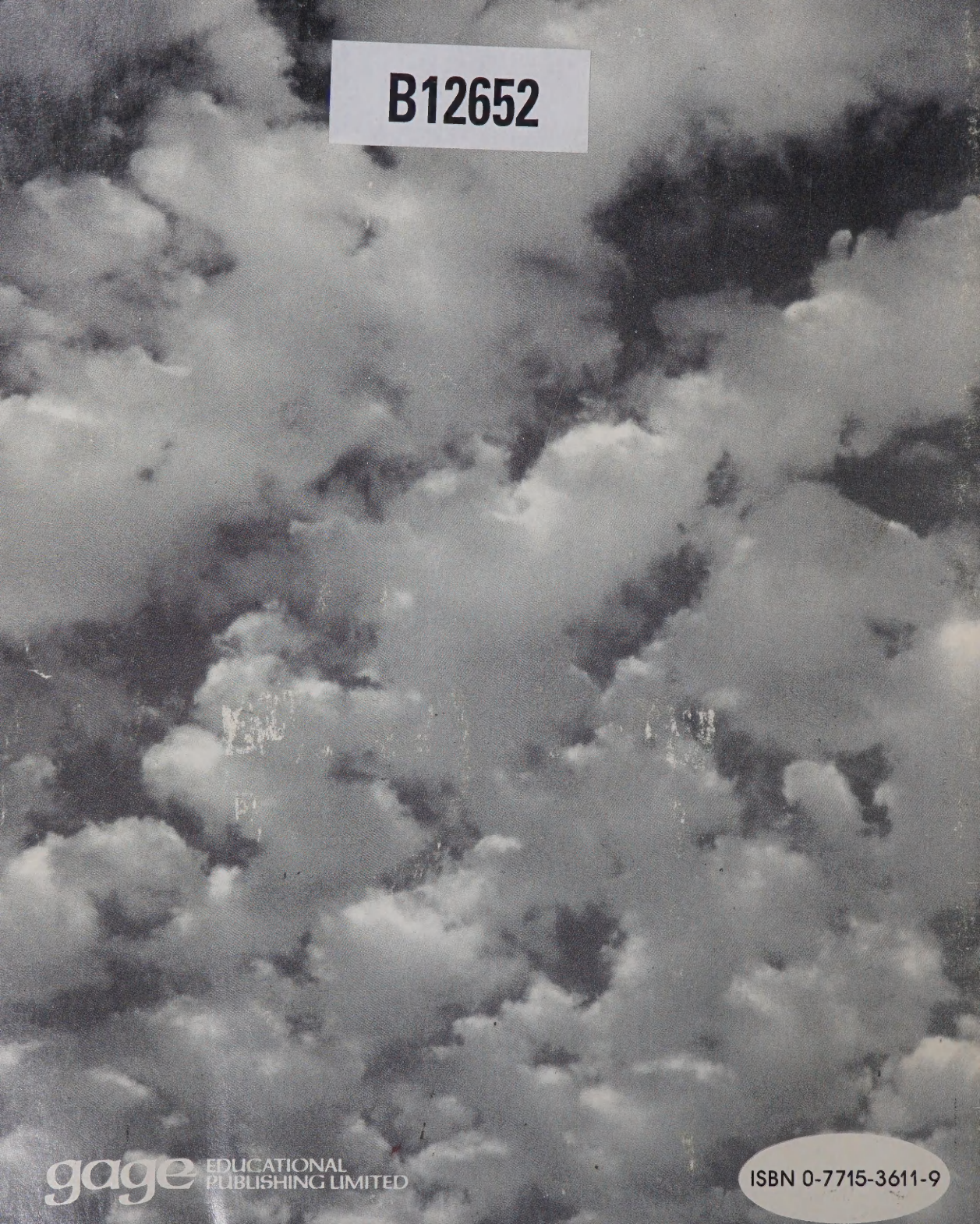

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